

The CONSTRUCTOR

OFFICIAL PUBLICATION OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA



Volume XXXVI

DECEMBER 1954

Number 12

● BUILDINGS

● HIGHWAYS

● AIRPORTS

● RAILROADS

PUBLIC WORKS



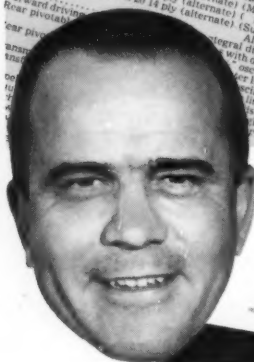
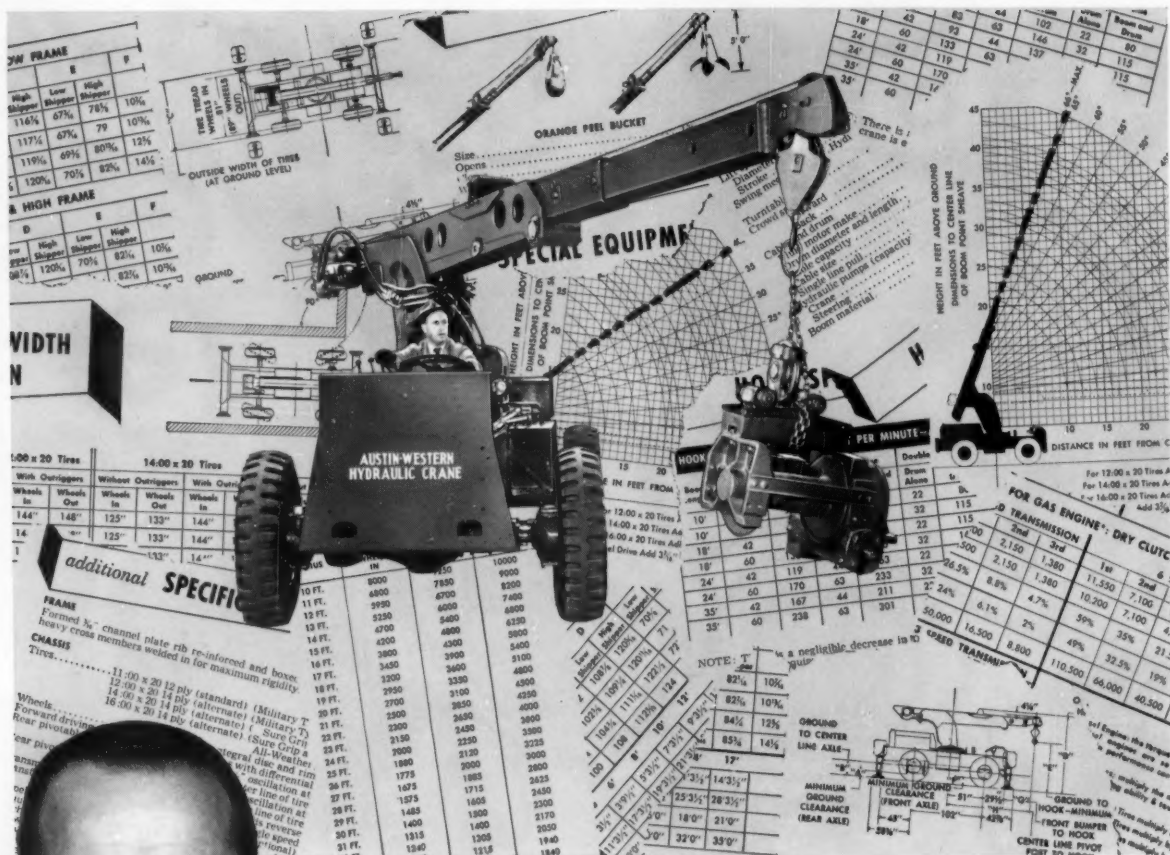
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Government Forecasts Another Peak Year—30

Voters Again Approve Big Bond Issues—27

Highway Maintenance in Connection—36



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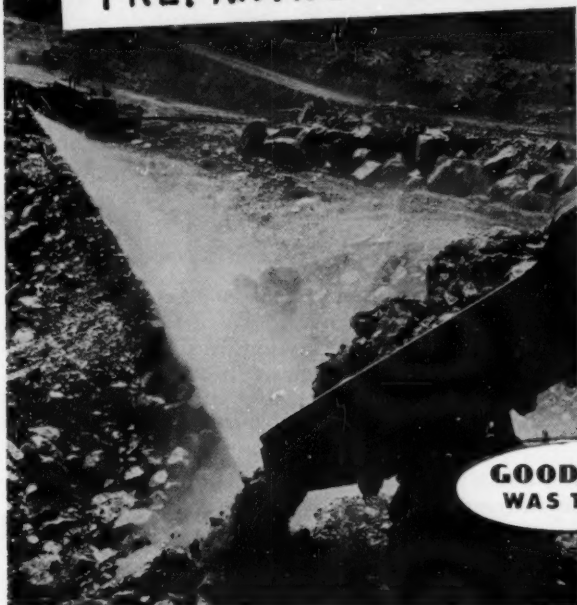
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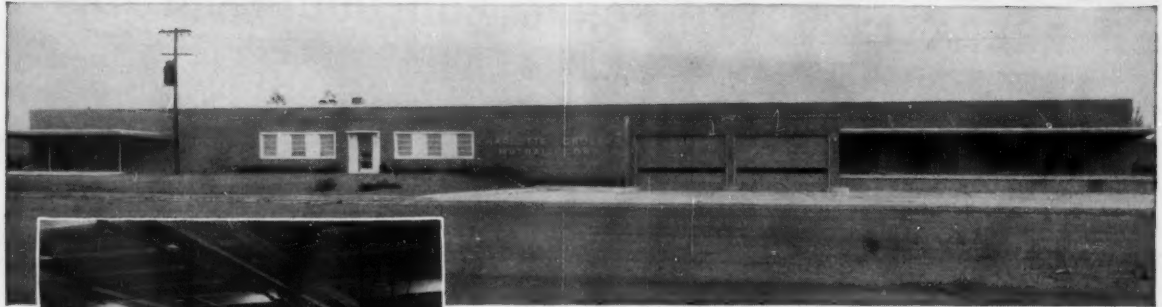
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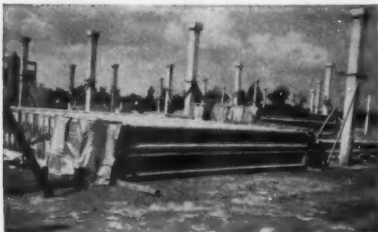
Concrete Prefabrication Pays



Charlotte Grocers Mutual Warehouse, 60,000 sq. ft. floor area, in "Acres for Industry" development, ten minutes from center of Charlotte, N. C.

Concrete prefabrication is growing by leaps and bounds, thanks to the economies of prestressed concrete members. This well-designed warehouse has precast girders, purlins and roof planks, all prestressed, as well as precast columns, fabricated at assembly-line speed with 'Incor'* 24-Hour Cement.

Designed for the material and method, prefabrication resulted in lowest construction cost, for a structure embodying utmost fire-safety and durability, with minimum insurance rates and lowest upkeep. Advantages well worth considering. *Reg. U. S. Pat. Off.



'Incor' concrete columns, 14" x 14", with 20" x 20" capitals, were precast at job site. Poured in morning, stripped in afternoon—48 columns produced in 12 days.



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Precast, prestressed 'Incor' concrete purlins, I-shape, 8" wide top and bottom flanges, 3" web, 18" deep, 24' in length, with angles for welding to girders and columns.

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The CONSTRUCTOR

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BUILDINGS • HIGHWAYS • AIRPORTS



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COVER

The Folsom Dam project, in a view taken this past summer, showing crane in place over the center of the dam on the concrete placement trestle. The Folsom project, near Sacramento, Calif., is a notable example of cooperation between the Corps of Engineers and the Bureau of Reclamation on a common construction site, with one being responsible for constructing the dam and the other for the power features. Story, page 51. (Photos by Mark Ogden of Watson & Meehan, Cummins Diesel engines, San Francisco.)

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Motor Scrapers at work on Washington County Airport in Pennsylvania



JOB-ENGINEERED FINANCE PLANS



The rough shale and clay surface you see here will soon be transformed into 1,750 additional feet of smooth runway at the Washington County Airport in Washington, Pennsylvania. These two LeTourneau motor scrapers, obtained from Pittsburgh's A. T. Green Machinery Co., are helping contractor S. P. Lightholder of Canonsburg keep ahead of schedule on a 381,000 cubic yard earth-moving job.

Mr. Lightholder says, "C.I.T. Corporation's financing of these units on a rental-purchase plan has enabled me to put this timesaving

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THE CONSTRUCTOR, DECEMBER 1954

Construction volume in 1955 expected to reach \$39.5 billion, surpassing this year's record of \$37 billion by 7 per cent, early estimates by Departments of Commerce and Labor show. The increase is expected to be shared almost equally by private and public construction, with private slightly ahead. Such an optimistic forecast by the usually conservative government agencies represents the largest annual volume increase of the past four years. That this year's new construction will reach \$37 billion was assured by the continued high volume of \$34.1 billion registered in the first 11 months of 1954 (page 23).

New 84th Congress, due to convene Jan. 5, will have a Democratic majority in both houses, but no pronounced changes in legislative policies affecting economy are expected. General cooperation is expected between Administration and Congress, though some modifications may be effected in taxation, defense spending, public power and other public works (page 25).

National Labor Relations Board, often accused lately of a pro-management bias by union officials, has recently decided several cases involving secondary boycotting in construction in which management can find little comfort. In one case, involving Stover Steel Services, the board held as lawful the picketing of a multi-employer construction site without indicating which employer was being picketed. For this and other cases see page 29.

Bond issues totaling more than \$1 billion were authorized for public works construction on city, state and county referendum ballots in general elections, demonstrating continuing popular support for such expenditures to cut down the backlog of urgently needed projects. Heavy emphasis was placed on schools and institutional building, with biggest authorizations in New York and California. Special elections also are being called for votes on bond issues (page 27).

Deepening channels of the Great Lakes to 27 feet to correspond with St. Lawrence Seaway at cost of \$109 million will be recommended to Army Board of Engineers, Col. W. P. Trower, Great Lakes Division Engineer reports. Work proposed in St. Mary's River, Straits of Mackinac, St. Clair River, Lake St. Clair and Detroit River would take 5 years after

appropriations, and must be approved by Chief of Engineers, governors of 8 states and Congress.

Gen. Lucius D. Clay, chairman of the President's Advisory Committee on a National Highway Program, addressing the American Municipal Association in Philadelphia Nov. 30, gave a preview of what the committee will recommend in its report to the President this month. General Clay did not speak from a prepared text, and press reports gave varying accounts of what he said. What he actually said, according to committee sources, indicates that the report will include these recommendations: (1) That the federal government spend about \$24 billion in the next 10 years on the interstate highway system and possible urban feeder routes that may be added to the system as its share of the \$50 billion highway expansion program proposed by the President; (2) that part of the revenue from present federal taxes on gasoline and lubricating oils be used to finance a bond issue in that amount over a 30-year period to provide for the 10-year federal expenditures; (3) that about \$550 million annually in federal-aid funds be allocated to the states for the primary and secondary systems (approximately the present authorization for those systems). The present yield of federal highway user taxes is about \$1 billion a year, which General Clay expects to increase over the years because of heavier gasoline and oil consumption. Widely published press reports said General Clay advocated reducing by half the \$50 billion additional highway expenditure proposed by the President. This evidently was a misconception of Clay's estimate of \$24 billion as the federal share. The \$50 billion figure represents needs on all highway systems, part of whose cost would be borne by state and local governments. The American Municipal Association unanimously endorsed the President's highway proposal. (More on highway program on page 40.)

Doubling of federal, state and local expenditures to meet highway needs for the next 20 years was recommended by the executive committee of the Governors' Conference at a meeting in Chicago Nov. 30. Gov. Robert Kennon of Louisiana, conference chairman, said the federal government's share of additional highway expenditures during the next 10 years should be about \$25 billion, with state

and local governments providing another \$25 billion to complete the \$50 billion increase in highway construction proposed by President Eisenhower. The governors recommended: (1) Financing of the proposed highway construction should be done in three categories—the interstate system, other federal-aid systems, and the state-local government system. (2) The federal government should assume primary responsibility for financing the interstate system. (3) The necessary federal funds of \$25 billion could come from three sources—general revenue, bond issues or securities in anticipation of future general revenue, "and/or the establishment of a road financing authority." (4) Actual construction, maintenance, administration and policing of the interstate system would be the responsibility of state and local governments. The governors' recommendations were presented to President Eisenhower Dec. 3. On the invitation of Governor Kennon, George C. Koss, Des Moines, Iowa, vice president of The Associated General Contractors of America, was in Chicago at the time of the meeting to consult with the governors on the highway recommendations.

Francis V. du Pont, Commissioner of Public Roads, announced last month that he would resign his office early next month and become a special assistant to Commerce Secretary Sinclair Weeks to devote full time to the President's expanded highway program. Deputy Commissioner Charles D. Curtiss will become acting commissioner (page 41).

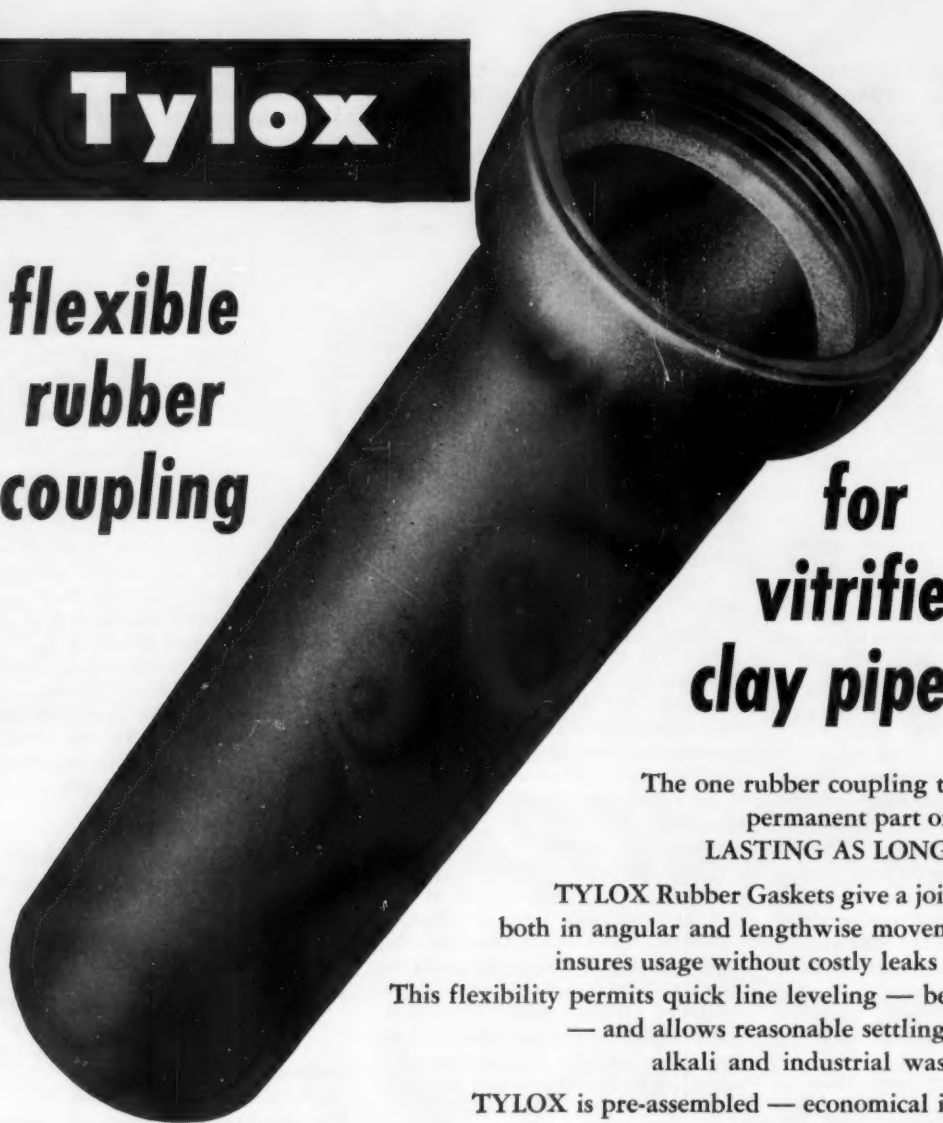
FHA mortgage applications continue at record levels as home buyers take advantage of liberal terms under recent housing legislation, with 54,000 registered in August, 67,000 in September and 59,350 in October. Inspections and appraisals have been speeded up by overtime work, increase of FHA staff and use of independent appraisers.

Housing boom is far outstripping extensions of city water and sewer mains all over country. Conference of FHA regional sanitary engineers recommended that developers seek competent private sanitary engineering guidance before purchasing land, consideration of smaller diameter sewers, better sewer jointing, improved inspection of construction, and improved structural design of treatment plants.

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Good Business Year Is Predicted for 1955, Second Only to 1953

» LOOK for a good business year in 1955. That is the prospect held out in forecasts by government economists and many business leaders.

Government economists say 1955 will be a better business year than 1954, but not up generally to the all-time high levels of economic activity attained in 1953. If so, it will be the second-best business year in history, since 1954 has been better than any other year with the exception of 1953.

New Construction Peak in 1955

A notable exception to the general forecast that economic levels next year will be somewhat below those of 1953 is the construction industry, which is looking ahead to another record-breaking annual volume, the tenth in succession. Outlook estimates for new construction in 1955, prepared jointly by the Building Materials and Construction Division, U. S. Department of Commerce, and the Bureau of Labor Statistics, U. S. Department of Labor, forecast a volume of \$39.5 billion, 7 per cent above the all-time high of \$37 billion indicated for this year. (Page 23.)

The construction forecast is based on the assumption that the nation's economy will remain relatively stable. Present indications are that economic stability will be maintained during the coming year.

Currently, the volume of new construction is continuing at a peak rate. (See accompanying box for figures.)

The Upturn in Business

The upturn in business which began in the early fall accelerated during November. In its national summary of business conditions last month, the Federal Reserve Board reported that industrial production increased some in October and rose further in early November. Unemployment declined more than seasonally in October. In early November department store sales showed a greater than seasonal increase. Commodity prices generally remained stable.

Industrial production in October was 125 per cent of the 1947-49 average, according to the board's preliminary seasonally adjusted index, as compared with 124 in September and 123 in July and August. A further rise in activity in the automobile and steel industries in November should result in another advance in the index

Volume of New Construction

The volume of new construction in November set two new records for the month and continued the all-time high cumulative total for the year which has been building up, month after month, a widening margin over the corresponding months of 1953, the previous record year.

- The total of new construction put in place in November was \$3.3 billion, according to preliminary estimates by the Departments of Commerce and Labor. This is a new record for the month. It represents an increase of 8 per cent over the November 1953 total of slightly more than \$3 billion. The November total was 6 per cent less than October's \$3.5 billion, a normal seasonal decline.

- New construction in November was at a seasonally adjusted annual rate of \$38.1 billion, a new all-time high.

- The cumulative total for 11 months was a record \$34.1 billion, 5 per cent above that for January-November 1953, which was \$32.5 billion.

New records were established in November also in two types of construction—office buildings and religious construction. Office building construction put in place totaled \$94 million for the month, and religious construction \$59 million.

Commercial construction as a whole was up slightly in November, while public works fell off some during the month. The volume of highway construction continued high.

of industrial production when all the figures for the month are compiled.

Highlights of the board's summary:

Automobiles.—After a drop during the period of changeovers in models, automobile assemblies recovered rapidly after mid-October, and in the second week of November reached the highest rate since May.

Household Durable Goods.—Production of television sets and most other major household durable goods remained at advanced levels in October.

Steel.—In mid-November steel pro-

duction was at a rate of 79 per cent of capacity, as compared with 73 per cent in October and 67 per cent in September.

Building Materials.—Lumber and other building materials showed further increases in October.

Nondurable Goods.—The output of nondurable goods increased somewhat in October, reflecting mainly gains in textiles, apparel and leather products.

Fuels.—Crude oil production and petroleum refining continued to show little change in October at levels somewhat below earlier highs. Coal production showed a moderate increase.

Employment.—Employment in non-agricultural establishments increased a little more than seasonally in October, and the average work week at factories rose slightly, to 39.9 hours. Unemployment declined by 360,000, to 2.7 million, a larger reduction than the usual seasonal decline. Hourly earnings showed no change, but average weekly earnings increased 36 cents, to \$72.22, the highest level reached this year, as a result of the rise in the work week.

Distribution.—Department store sales increased in October, on a seasonally adjusted basis, to about the summer level, and were somewhat above a year ago. In early November they rose further. Total retail sales in October were reduced to some extent by the drop in automobile sales accompanying model changeovers. Dealers' stocks of new automobiles at the end of October were about 50 per cent below last year's model-change-over low.

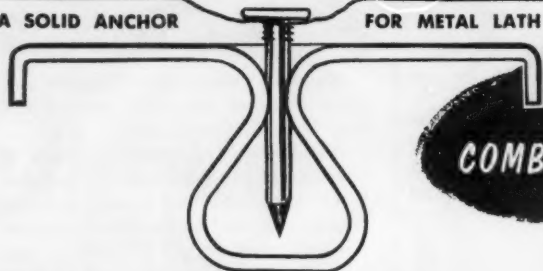
Gross National Product Steady

The gross national product, representing the dollar value of all goods and services, was at an annual rate of \$355.5 billion in the third quarter, according to the Office of Business Economics, U. S. Department of Commerce. The G.N.P. remained at a steady rate during the first three quarters of 1954, varying only between \$355.5 billion and \$356 billion. This is about midway between the all-time high G.N.P. of \$365 billion in 1953 and the \$346 billion figure for 1952.

Personal income, or the income received by individuals, also has remained steady this year, the annual rate of \$286 billion in the third quarter comparing with \$285.5 billion in the second and \$285 billion in the first.

IS **SPEED** OF ANY CONSEQUENCE TO AN ARCHITECT OR STRUCTURAL ENGINEER?

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FACT NO. 1

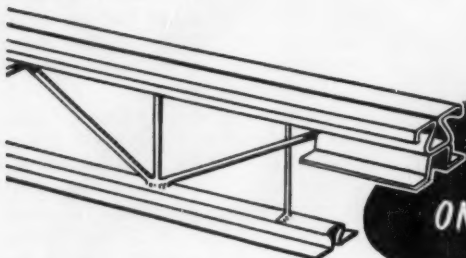
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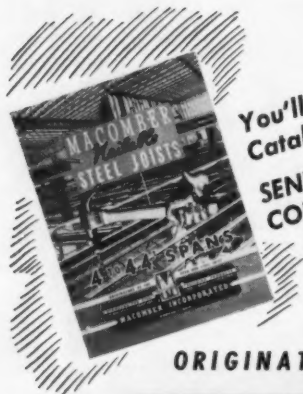
ANY PRODUCT basically designed to save man hours and reduce material costs to the point construction costs can be lowered and better controlled—answers that question—and places a direct responsibility on the specifying team.

When metal lath or any centering material is nailed, the operation is faster than other methods and the solid anchor prevents tons of wasted concrete from sagging down into pockets between joists.



FACT NO. 2

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A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for November stands at Index Number 432 according to the A.G.C. Index. The cost figure for November 1953 was 418. The 1913 average equals 100.

WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 608 for November. One year ago the average stood at 587. The average prices paid by contractors for basic construction materials for November stand at Index

Number 315. The average a year ago stood at 306. The 1913 average, again, equals 100.

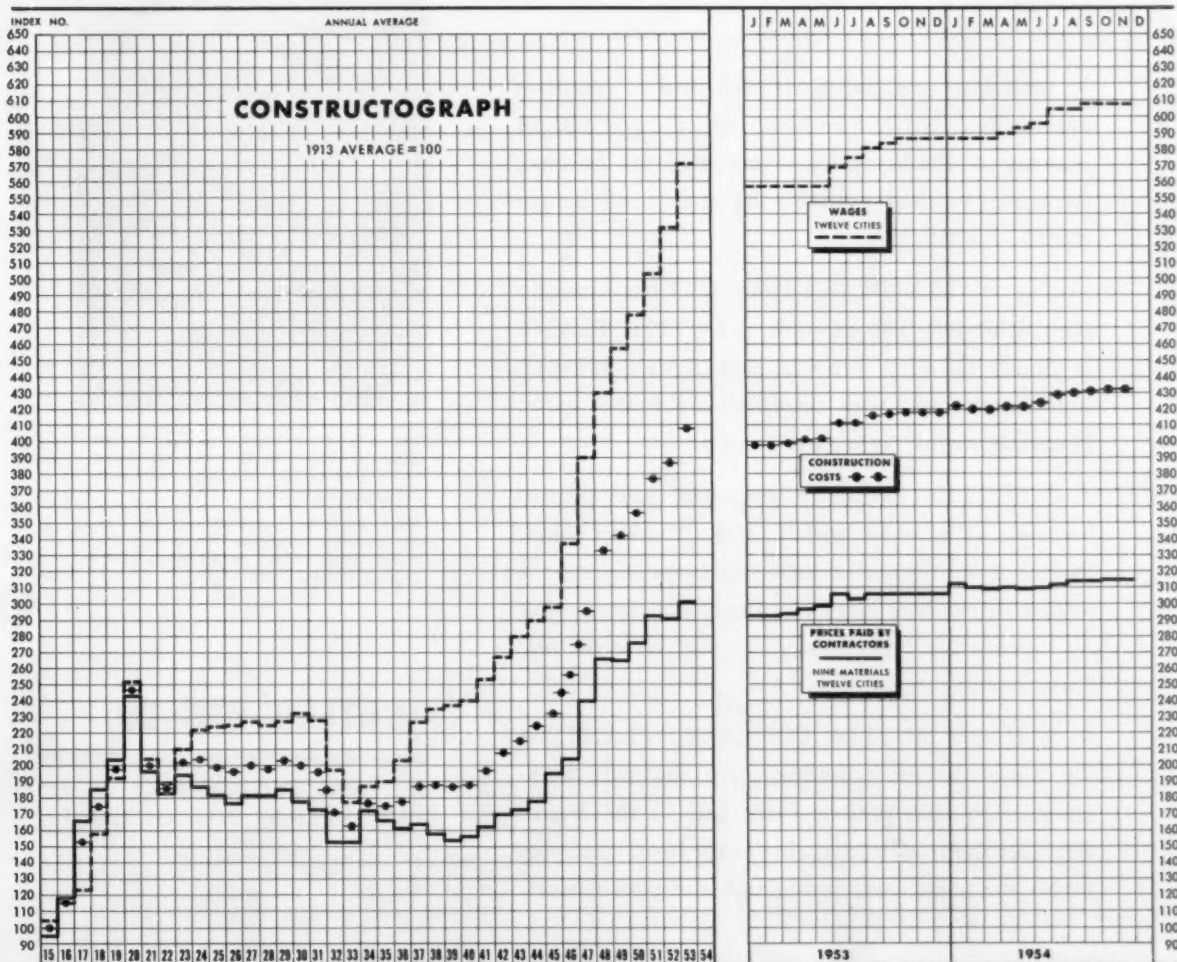
CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during October (Index Number 345, based on 1936-38) is an increase of 25 points from September and an increase of 1 point from October 1953. (F. W. Dodge Corp.)

REVENUE FREIGHT LOADINGS

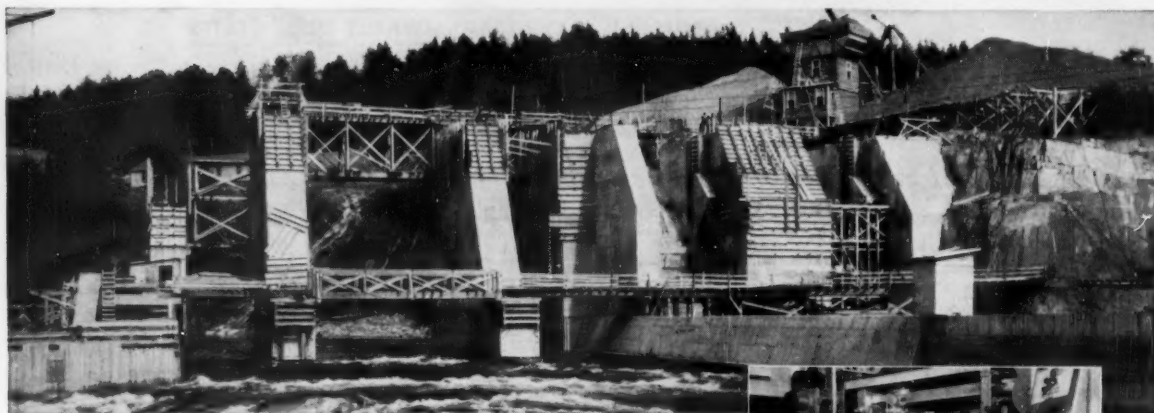
Revenue freight loaded during the first 47 weeks of 1954 totaled 30,761,090 cars. For the same period in 1953, loadings amounted to 35,291,526 cars. This represents a decrease of 12.8%.

Wage, Material Price and Construction Cost Trends



LOOK NO HANDS!

**BUTLER
CONCRETE PLANTS
APPROACH
ROBOT AUTOMATION**

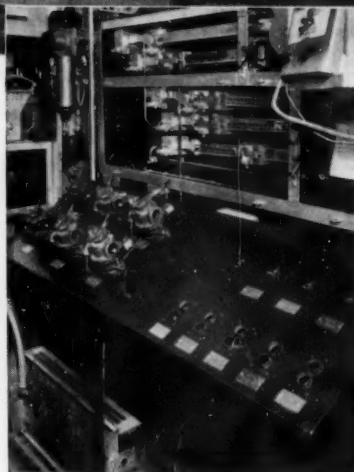


In manufacturing industries, the goal is complete automation. No human handling of materials, no humans on machines. Raw materials to finished, packaged product without the chance of human error.

And in BUTLER PLANTS that goal has virtually been achieved. For example, a BUTLER PLANT in South Carolina provides bin signals automatically interlocked with turnhead and tunnel gates. Materials supply is *always* maintained.

And BUTLER *automatic* aggregate and cement batching is already widely and profitably used. Push button remote control can be provided in a distant dispatchers office . . . Profitable time saving . . . profitable labor saving — and an *electronic* brain never forgets.

In your new BUTLER CONCRETE PLANT let the Butler Engineer design it for maximum automation. In your present Plant call in the Butler Engineer to *install* automation at the level most profitably suited for your production and your market.



Top — Butler Central Mixing Plant on New Brunswick Dam job. One of many Butler Plants used on Canada's huge hydro-electric expansion.

Below — Butler push-button control with air operated aggregate filling and discharge gates provide labor-saving assurance of uniform batch quality.

BUTLER BIN CO.

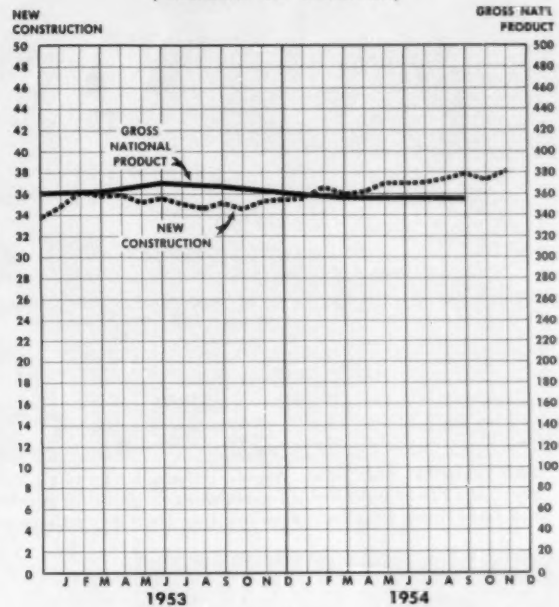
953 Blackstone Ave.
WAUKESHA, WISCONSIN

● **TOTAL Construction Compared with Gross National Product**
(BILLIONS OF DOLLARS)



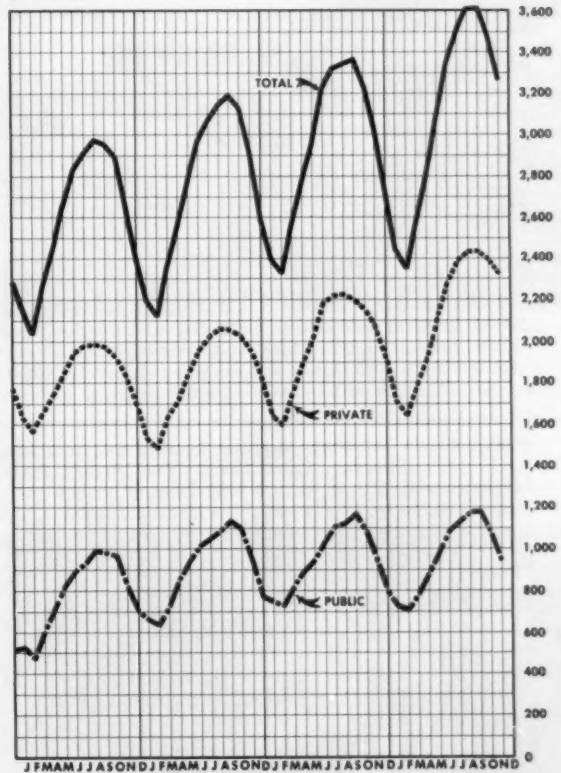
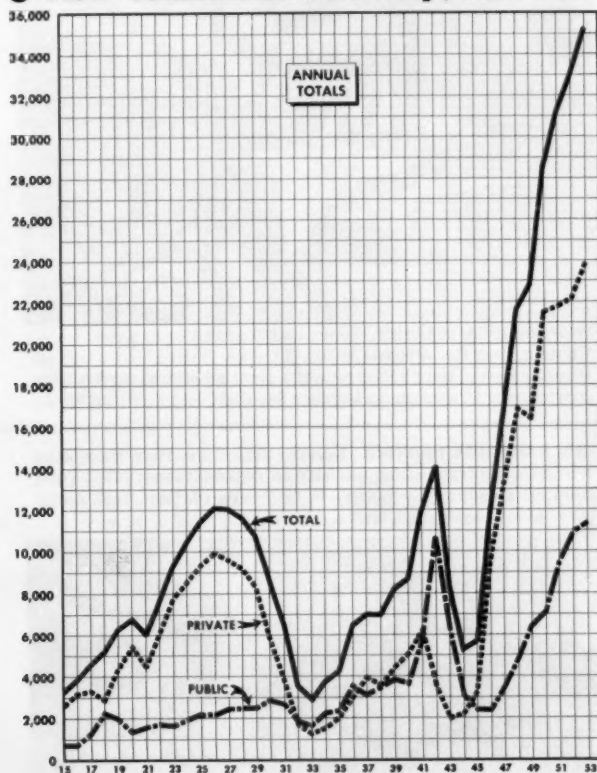
DATA SUPPLIED BY DEPT. OF COMMERCE

● **NEW Construction Compared with Gross National Product ***
(BILLIONS OF DOLLARS)



*Seasonally adjusted at an annual rate

● **New Construction Activity (MILLIONS OF DOLLARS)**



DATA SUPPLIED BY DEPTS. OF COMMERCE AND LABOR



OHIO TURNPIKE. Max Julian, Angola, Indiana, holder of a 1,000,000-cubic yard earthmoving sub-contract, rates INTERNATIONALS this way: "My TD-24 powered scrapers can't be beat for production and my 2T-75 high-speed earthmovers are faster, sturdier and haul more weighed yards per trip than any others with the same capacity."



MAINE TURNPIKE EXTENSION. DeMatteo Construction Co., Quincy, Mass., team these three INTERNATIONAL Model 2T-75s with 8 TD-24s with dozers and scrapers to move 1,250,000 cu. yds. of borrow on 9.145-mile Turnpike contract.



WEST VIRGINIA TURNPIKE. Bates and Rogers Construction Corp., Chicago, find the INTERNATIONAL TD-18A crawler and 3 cu. yd. INTERNATIONAL DROTT Skid-Shovel a great all-around performer in constructing 1/2-mile tunnel between Standard and Fairfield, W. Va.

WEST VIRGINIA TURNPIKE, Morrison-Knudsen Co., Inc. and R. E. Mills Company, Cabin Creek, West Virginia, used INTERNATIONAL TD-24 to push-load scrapers on a 9-mile contract on the recently opened West Virginia Turnpike.



NEW HAMPSHIRE TURNPIKE. Leveling fill on the New Hampshire Turnpike is a fast moving job with an INTERNATIONAL TD-24 and bulldozer supplying the power. R. G. Watkins & Sons, Inc., Amesbury, Mass., equipment owner.



IH works on the Superhighways

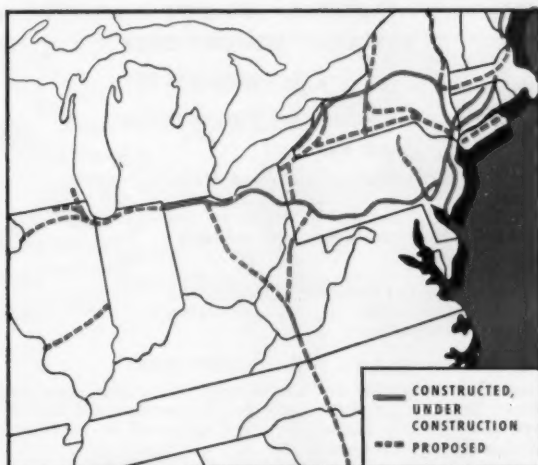
From pioneering to paving, INTERNATIONAL equipment speeds the nationwide superhighway projects with lower costs and greater contractor profit.

Contractors who build super roads buy INTERNATIONAL equipment for the same reason the general public snaps up Turnpike bonds—IH is a shrewd, safe investment netting top returns.

There's one common characteristic about all INTERNATIONAL earthmoving equipment—it is designed to move more paydirt for less money from start to finish on every job. Best thing is that these operating advantages are available to all contractors—fleet owners and owners of a single tractor, alike.

Call your INTERNATIONAL Industrial Power Distributor today for full details or an on-your-job demonstration of the IH equipment needed in your operations. You'll be money ahead this year and in the years to come. Besides, you can always depend on prompt, efficient service and genuine replacement parts for your INTERNATIONALS. Wherever your job may be, an INTERNATIONAL Industrial Power Distributor is nearby to serve you on the job, in his completely equipped shop.

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS



This map shows our growing network of toll roads in the eastern section of the nation with completed projects and those under construction shown in solid lines, and proposed turnpikes appearing in dotted lines.



INTERNATIONAL
INDUSTRIAL POWER

MAKES EVERY LOAD A PAYLOAD



MAINE TURNPIKE EXTENSION. Here are five of the eight INTERNATIONAL TD-24s used by Nello L. Teer Company, Durham, North Carolina, shown loading out the fill on one of the firm's prime contracts totaling 13.48 miles on the Maine Turnpike Extension.

NEW YORK THRUWAY. D. W. Winkelman Company, Inc., Syracuse, N. Y., uses INTERNATIONAL TD-24 to pull elevating loader that keeps eight haul trucks rolling with 400 cubic yards of fill hourly on New York Thruway approach roads.



PENNSYLVANIA TURNPIKE EXTENSION. J. D. Morrissey, Inc., Philadelphia, uses seven INTERNATIONAL TD-24s, two INTERNATIONAL TD-18As on \$5,385,313 prime contract for 7½ miles of the Delaware River extension of the Pennsylvania Turnpike.



Order No.	MANUALS	Per Copy	Per Dozen	Per 100
1.	A.G.C. Manual (Contains documents listed below: Nos. 3-30, inclusive, and Nos. 34, 35, 36, 36a, 37, 38).	\$5.00	\$50.00	_____
2.	Accident Prevention Manual (Revised and enlarged 1952) (Pocket-sized sectional reprints available. Information on request.)	3.00	30.00	\$210.00
CONTRACTS				
3.	Suggested Form of Contract, Engineering Construction Projects, prepared by A.S.C.E. and A.G.C., 1953 edition.	.25	2.75	20.00
4.	Standard Building Contract of the American Institute of Architects—Revised 6th Edition	.50		47.50
5.	Subcontract form—American Institute of Architects—Revised 6th Edition.	.10		9.50
6.	Standard Form of Acceptance of Subcontractor's Proposal	.10		9.50
7.	Standard Government Contract.	.01		
8.	A.G.C. Cost Plus a Fee Contract.	.10	.50	2.50
9.	A.I.A. Cost Plus a Fee Agreement between Contractor and Owner—Revised 6th Edition	.10		
10.	Uniform Construction Forms, Municipal Engineering Construction Projects, prepared by A.P.W.A. and A.G.C.	.25	2.75	20.00
11.	Equipment Rental Agreement.	.10	.50	3.00
12.	A.G.C. Proposal Form.	.10	.50	3.00
ESTIMATING AND ACCOUNTING				
13.	A.I.A. Accounting Form #701 "Change Order"	.20	1.80	12.00
14.	A.I.A. Accounting Form #702 "Request for Partial Payment"	.20	1.80	12.00
15.	A.I.A. Accounting Form #703 "Certificate for Payment"	.20	1.80	12.00
16.	Building Estimate Summary.	.10	.50	3.00
17.	Job Overhead Summary.	.10	.50	3.00
20.	Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949)	1.00	10.00	65.00
21.	Equipment Record—Bond paper.	.10	.50	3.00
22.	Equipment Record—Cardboard	.10	.50	3.50
INVESTIGATION OF BIDDERS				
24.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Engineering Construction (For Qualifying Before Bidding)	.20	1.80	12.00

Order No.	INVESTIGATION OF BIDDERS (Continued)	Per Copy	Per Dozen	Per 100
25.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover. Building Construction (For Qualifying Before Bidding)	\$.20	\$1.80	\$12.00
26.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding) .....	.20	1.80	12.00
27.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding) .....	.20	1.80	12.00
28.	Financial Statement and Questionnaire for Credit Transactions .....	.20	1.80	12.00
MISCELLANEOUS				
29.	Insurance Check List.....	.10	1.00	5.00
30.	The Functions of a General Contractor...	.10	.75	6.00
34.	A.G.C. Governing Provisions.....	.10	.50	3.00
35.	A.G.C. Code of Ethical Conduct.....	.10	.50	3.00
36.	Concrete Mixer Standards.....			
36a.	Contractors' Pump Standards.....		Single copies—no	
37.	A.I.A. Standard Form of Arbitration Procedure		charge; quantity	
38.	Suggested Guide to Bidding Procedure....		prices on applica-	
38a.	Invitation to Bid Form for Subcontracts..		tion.	

SIGNS AND SEALS

39. A.G.C. Cardboard Seal (red and black) 2 1/2" dia. ....	.50
40. A.G.C. Metal Seal (red and black) 10" dia. ....	.40
41. A.G.C. Decalcomania Seal (red and black) a. 10" dia. ....	.30
b. 5" dia. ....	.10
Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more.	

Form SS1: Application for Employment; Form SS2: Employees' History Record; Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

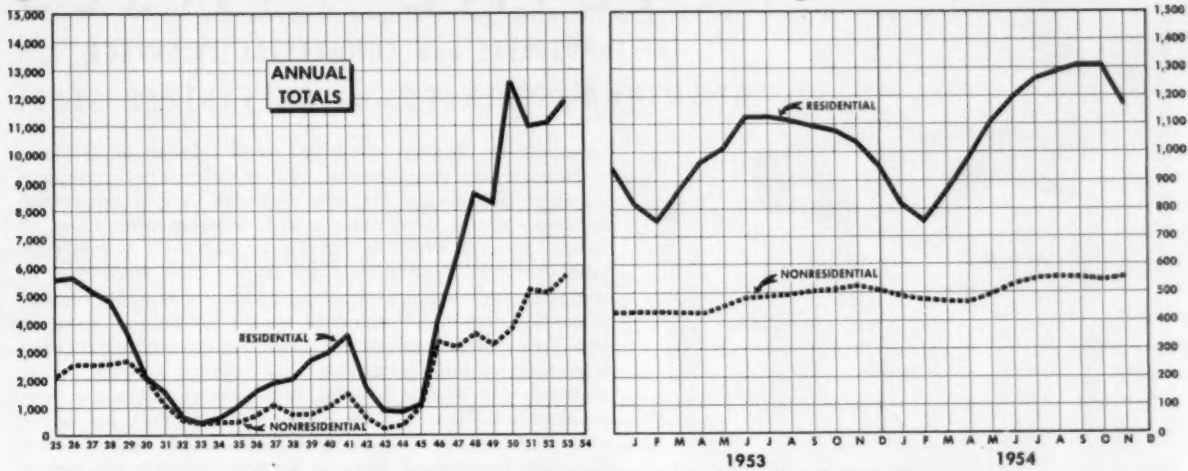
USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

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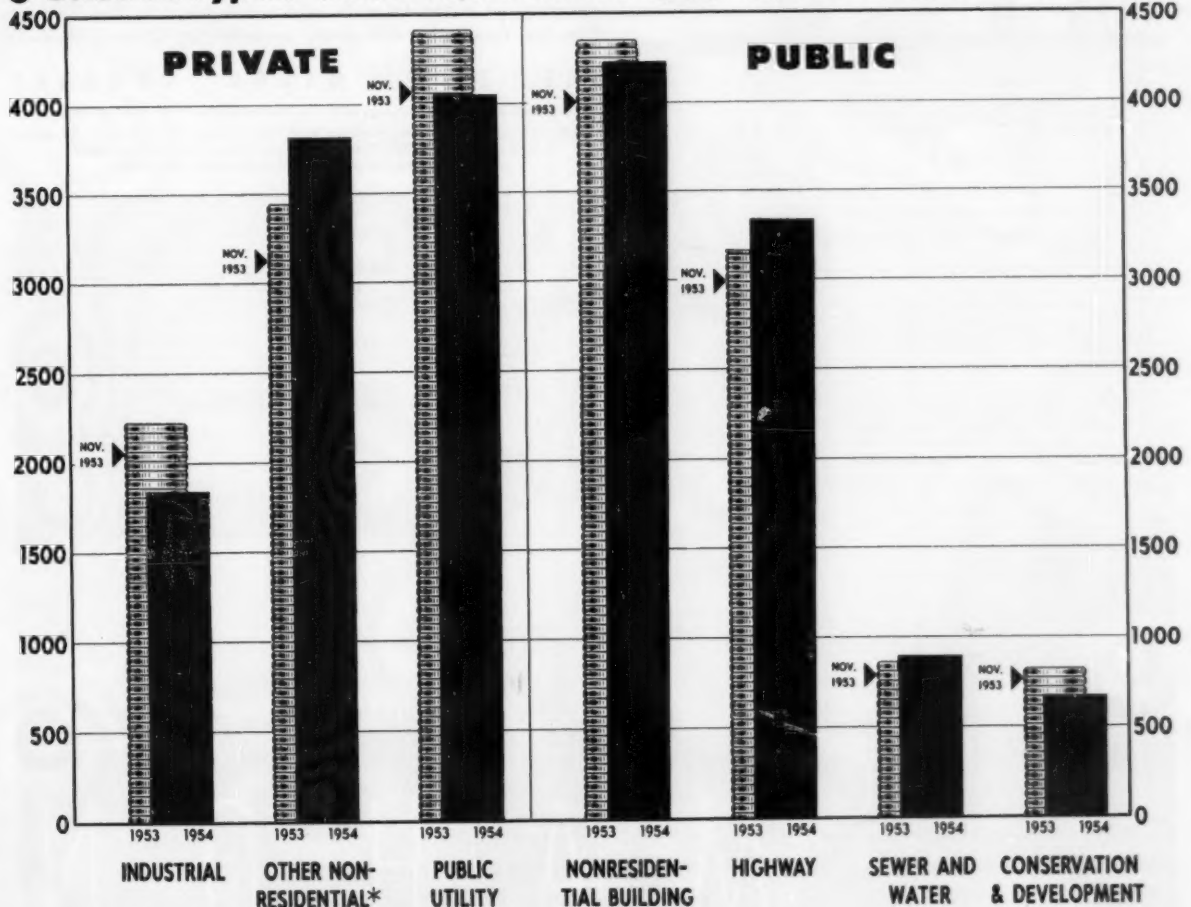
Dec. 1954

NEW CONSTRUCTION ACTIVITY

● Private Residential and Nonresidential Building * (MILLIONS OF DOLLARS)



● Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1953, 1954 VOLUME THROUGH NOVEMBER

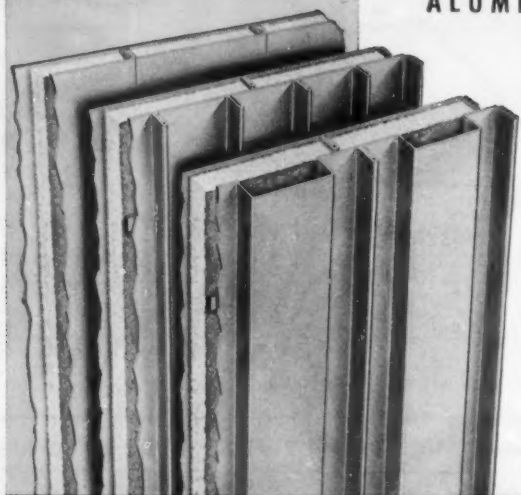


INSULATED

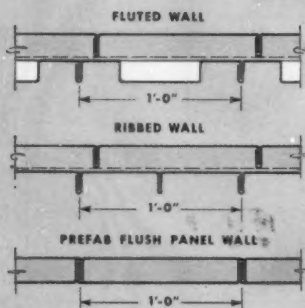
METAL WALLS

for INDUSTRIAL and COMMERCIAL BUILDINGS

ALUMINUM, STAINLESS or GALVANIZED STEEL



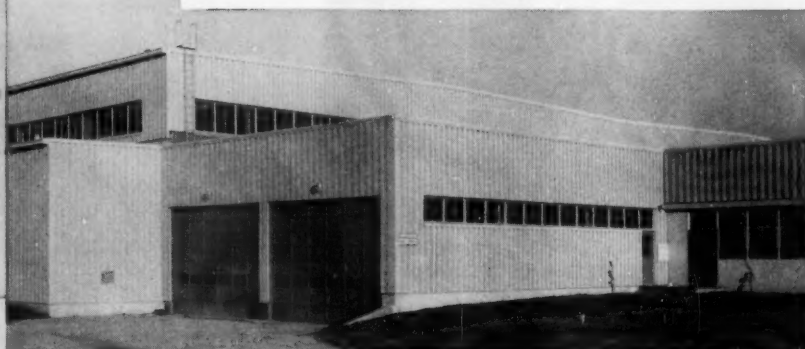
New, modern buildings with bright metal exteriors of Aluminum or Stainless Steel are appearing all over the country . . . complete industrial plants—like the one illustrated below, commercial buildings, schools, powerhouses, and numerous other types of special purpose structures have been built with Mahon Insulated Metal Walls. Architects and owners alike were quick to recognize the low-cost permanence and the remarkable thermal properties provided in this light weight curtain wall construction. They also recognized the cumulative advantages deriving from reduced construction time . . . buildings can be quickly enclosed with Insulated Metal Walls—even under low temperature conditions. Mahon Insulated Metal Walls are available in three distinctive exterior patterns in Stainless Steel, Aluminum, Galvanized Steel, or Enamel Coated Steel. Mahon "Fluted" and "Ribbed" walls can be field erected up to sixty feet in height without a horizontal joint—a feature of Mahon walls which is extremely important in buildings where high expanses of unbroken wall surface are common. See Sweet's Files for complete information, or write for Catalog B-55-B.



The Over-all "U" Factor of the various Types of Mahon Insulated Metal Walls is Equivalent to or Better than a Conventional sixteen inch Masonry Wall.

THE R. C. MAHON COMPANY

Detroit 34, Mich. • Chicago 4, Ill. • Representatives in All Principal Cities
Manufacturers of Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms; Rolling Steel Doors, Grilles and Automatic Underwriters' Labeled Rolling Steel Fire Doors and Fire Shutters.



MAHON

For Moderate Income Families of Large Cities

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

The decrease in the average cost of living continued for the third consecutive month. The Bureau of Labor Statistics reports a 0.2 per cent decrease to 114.5 for the month ending Oct. 15. It was 0.8 per cent lower than the all-time peak reached in October, 1953.

A decline in food prices was chiefly responsible for the decrease, thus continuing a trend since the fall of 1952. Transportation and housefurnishing costs also went down. There was a slight increase, however, in the prices of apparel, reading and recreation, fuel, utilities, medical care and rent.

The food index was 1.6 per cent lower than a year ago and 0.5 per cent off the preceding month's mark. The principal factor was a rather sharp drop in pork and poultry prices. Coffee prices also continued to decline. Fresh fruit prices were less than a month ago but this decline was offset by an increase in vegetable prices. Milk and butter prices also showed a slight increase.

The housing index remained the same. Rents, fuels, utilities went up but this increase was balanced by a decline in household equipment prices. This was due to the dealers' attempt to meet competition by discount houses.

New car prices (1954 models) showed a decrease, while apparel prices continued their upward trend.

The consumer price index, formerly calculated on the base of 1935-39 = 100, was converted beginning last year to the new base 1947-49 = 100 in compliance with recommendations of the Bureau of the Budget.

A portion of this index below indicates the average changes in retail prices of selected goods, rents, and services bought by the average family of moderate income from August 15, 1952 to October 15, 1954.

They are presented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

Aside from the change of the base years, the revised index includes prices of about 300 items, compared to some 200 for the previous index. The "weight" assigned to items is now based on facts concerning family expenditures of wage earners and clerical workers found in a survey of consumer expenditures conducted by the bureau.

The first five cities in the table below are checked and reported on monthly. The other 15 cities are surveyed and their indexes published quarterly.

	1952			1953			1954		
	AUG.	SEPT.	OCT.	AUG.	SEPT.	OCT.	AUG.	SEPT.	OCT.
Average.....	114.3	114.1	114.2	115.0	115.2	115.4	115.0	114.7	114.5
New York, N. Y.....	112.2	112.4	112.4	112.7	113.2	113.3	113.0	112.7	112.6
Chicago, Ill.....	115.5	115.0	115.0	116.3	116.6	117.1	117.7	117.4	117.1
Los Angeles, Calif.....	114.9	115.0	114.8	115.8	116.2	116.3	115.1	115.4	114.8
Philadelphia, Pa.....	114.9	114.7	114.6	114.9	115.2	115.3	116.2	116.2	116.1
Detroit, Mich.....	115.0	114.7	115.5	116.9	116.9	117.2	116.8	116.2	116.0
Atlanta, Ga.....	117.0	.....	.....	.....	117.6	.....	.....	116.3	.....
Baltimore, Md.....	.....	115.0	.....	.....	115.0	.....	.....	115.2	.....
Boston, Mass.....	113.7	113.2	113.4	.....	.....	113.8	.....	.....	113.5
Cincinnati, Ohio.....	113.4	113.2	113.3	.....	115.3	.....	.....	114.3	.....
Cleveland, Ohio.....	114.0	.....	.....	115.1	.....	.....	115.3	.....	.....
Houston, Texas.....	115.8	115.5	116.1	116.8	.....	.....	116.5	.....	.....
Kansas City, Mo.....	.....	.....	115.2	.....	.....	115.7	.....	.....	115.7
Minneapolis, Minn.....	.....	114.8	.....	.....	.....	116.6	.....	.....	116.9
Pittsburgh, Pa.....	113.5	113.2	113.4	.....	.....	114.7	.....	.....	114.3
Portland, Ore.....	.....	.....	115.0	.....	.....	116.1	.....	.....	115.2
St. Louis, Mo.....	.....	115.5	.....	.....	117.1	.....	.....	115.7	.....
San Francisco, Calif.....	.....	114.5	.....	.....	116.9	.....	.....	116.2	.....
Scranton, Pa.....	114.0	.....	.....	113.2	.....	.....	112.4	.....	.....
Seattle, Wash.....	114.6	.....	.....	116.8	.....	.....	116.2	.....	.....
Washington, D. C.....	114.1	.....	.....	114.2	.....	.....	114.1	.....	.....

Concrete Supplier and Contractor Agree: "Duraplastic* provides a more workable mix... better results...at lower cost"

CONCRETE SUPPLIER Herbert Kneller, v.p. and general manager of the Ezra Stipp Construction Co., Scranton, Pa., reports: "Our customers show a preference for ready-mixed concrete made with Duraplastic cement. That's why we've used it since it was first introduced. Experience has shown that Duraplastic produces excellent results for almost every type of construction work."

WELL-KNOWN BUILDER D. W. Richardson, president of the R. D. Richardson Construction Co., Scranton, Pa., also recommends Duraplastic. "Duraplastic gives us a more workable, plastic mix," says Mr. Richardson. "This means we get better placing and appearance at lower cost to us."



POURING TRANSIT-MIXED DURAPLASTIC concrete for Bell Telephone Dial Exchange in Olyphant, Pa. General Contractor: R. D. Richardson Constr. Co.; Ready-Mixed Concrete: Ezra Stipp Constr. Co., Scranton, Pa.



WORKABLE CONCRETE made with Duraplastic facilitates placement work in construction of this type. Workmen find it easy to place Duraplastic concrete properly around steel reinforcing.

Many others throughout the building and construction field have learned to count on the advantages of Duraplastic air-entraining portland cement. Duraplastic makes a more plastic, more cohesive, more uniform mix—less mixing water is needed for a given slump . . . segregation and water gain are minimized.

What's more, with Duraplastic you can save on construction time. That's because the greater plasticity of Duraplastic-made concrete is a real aid to faster, easier placement. All these advantages — *plus* improved surface appearance — are yours when you build with Duraplastic.

YET DURAPLASTIC COSTS NO MORE! It sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

OFFICES: Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

*"Duraplastic" is the registered trade-mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.



DURAPLASTIC

AIR-ENTRAINING PORTLAND CEMENT



Makes Better Concrete at No Extra Cost

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station

Sidelights for Contractors

By John C. Hayes, Counsel

Hayes and Hayes, Munsey Building, Washington 4, D. C.

Taxes

Income Tax Forms.—The Commissioner of Internal Revenue has announced that direct mailing of income tax return forms to individual taxpayers will not be made until after Christmas. However, a supply of such forms will be available at the various field offices of the Internal Revenue Service after the first of December, where they may be obtained by any taxpayers or their representatives who desire these forms at an early date. The forms and accompanying instructions may be expected to differ in many particulars from those for 1953, reflecting the numerous changes made by the new Revenue Code.

Income Tax Regulations.—While Internal Revenue had hoped that most of its new regulations under the Revenue Code of 1954 would be published before the end of this year, it indicated that these rules may not be ready until January 1955. Tentative regulations have been released in 1954 on a limited number of subjects, including the important matter of depreciation. After all of the regulations have been rewritten, Internal Revenue, it is understood, will rewrite Bulletin "F" (last previously revised in January 1942), its average useful life and depreciation tables.

Employee Travel Expense.—In a published ruling the Internal Revenue Service has set forth at length the principles applicable in resolving problems concerning (1) the substantiation of deductions claimed by an individual for traveling expenses, (2) the determination of whether a taxpayer is in travel status, and (3) the deductibility of automobile and other transportation expenses incurred by an employee.

Among the general rules noted are that a taxpayer need not obtain receipts for each meal and night's lodging but should maintain adequate day-by-day records in sufficient detail to substantiate his expenses. Expenses incurred by an employee for meals and lodging at his principal or regular

post of duty are not deductible even though such place is located at a distance from his residence. And a taxpayer can deduct the cost of his meals and lodging as a traveling expense incurred in carrying on his trade or business only while his duties require him to be away "overnight" from his principal or regular post of duty during the taxable year.

Distrain for Taxes.—A district court ruled that the government is entitled to a judgment against a construction company for the amount the latter was indebted to a delinquent taxpayer, where the construction firm paid off its indebtedness to the taxpayer after receiving a notice of the government's lien and levy and copies of the warrants of distraint previously served on the taxpayer.

Hurricane Losses.—The importance to the taxpayer of establishing adequate proof of the extent of a casualty loss, such as that suffered by his property in a hurricane, is demonstrated by a recent Tax Court decision. The court allowed an apartment house owner only a small fraction of the claimed hurricane damage where the owner did not sustain his burden of proving the amount of the uncompensated loss, the evidence presented was confusing, and the expert testimony extremely weak.

Assignment of Income.—The income from a manufacturing business remained taxable to the husband, the Tax Court concluded, rather than becoming the income of his wife, to whom he had gone through the motions of transferring the business in an attempt to defeat a possible judgment in a personal injury action. The husband continued to control the business income, the assets of the business were worth little without his expert knowledge, and the wife took little or no part in management.

Endowment Policies.—A circuit court held that the excess of cash surrender value received by an employee-stockholder on surrender of his endowment policy, over the aggregate premiums paid by him, constituted taxable in-

come, although the cash surrender value did not exceed the combined payments made by himself and his employer. The premium payments made by employer had not been regarded as compensation to employee, as such payments had not been deducted by the employer as a business expense nor included by the employee as taxable income; and the employer had remained the named death beneficiary under the policy until its surrender by the owner-employee.

Bad Debt Deduction.—A controlling stockholder has been denied a bad debt deduction by a circuit court, where it appeared that he voluntarily canceled the corporation's notes to him in consideration of a bank's making an additional loan to the corporation, rather than because the notes he held were thought to be worthless.

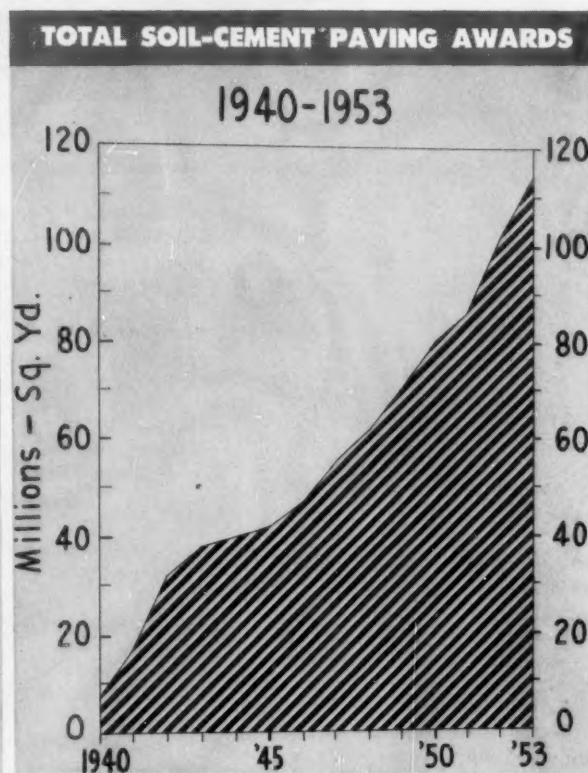
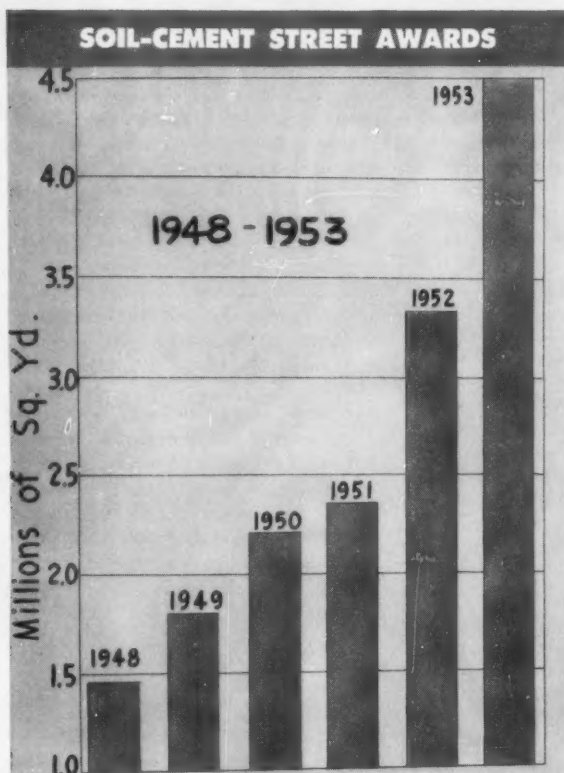
Estate Tax.—The Internal Revenue Service has ruled that a federal estate tax return filed in accordance with date of death values may, if the executor or administrator so desires, be superseded by an amended return showing the values as of one year after death or as of the intermediate dates prescribed by the code, if the amended return is filed within 15 months after the date of death or within a duly granted extension, provided the executor or administrator is not estopped from changing his previously indicated election.

A district court held that the remaining balance in a joint bank account should be included in full in a decedent's gross estate, under the 1939 Code, section 811(e), in the absence of evidence to the contrary.

Series G Savings Bonds, according to a circuit court decision, are to be valued for estate tax purposes at their par value, even though their redemption value in advance of maturity is less. The court view is based upon the rights to keep the bonds until maturity, to redeem them at par within six months after the owner's death, and to receive $2\frac{1}{2}$ per cent interest on par until maturity.

Soil Cement Is Climbing Fast

As Base Course for Streets, Roads and Airports

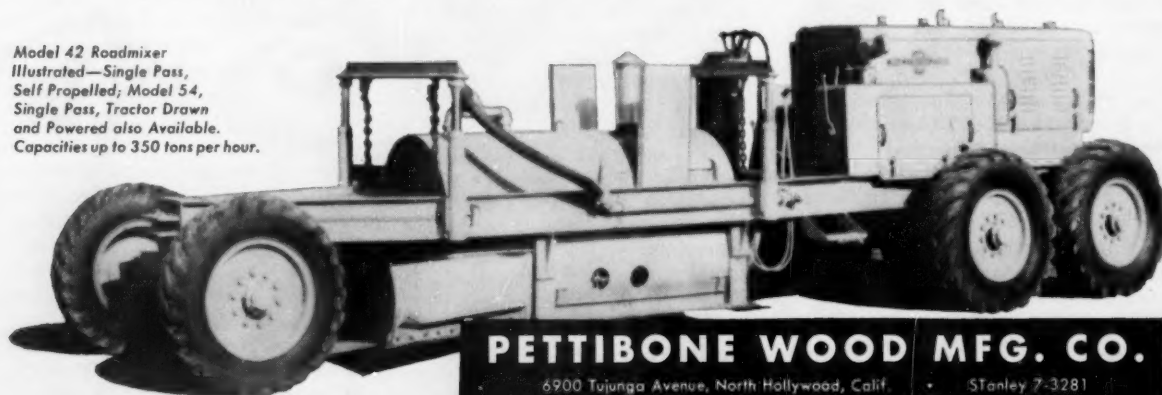


Most Soil Cement Is Mixed With Pettibone Wood Mixers

Average soil cement bid prices range from 80 to 90 cents per square yard. A soil cement base course resists moisture, erosion and pumping action of concrete

slabs. It virtually eliminates vertical displacement and nullifies plasticity. It substantially prolongs the life of other surfaces, too. Write for informative case histories.

Model 42 Roadmixer
Illustrated—Single Pass,
Self Propelled; Model 54,
Single Pass, Tractor Drawn
and Powered also Available.
Capacities up to 350 tons per hour.



PETTIBONE WOOD MFG. CO.

6900 Tujunga Avenue, North Hollywood, Calif.

STanley 7-3281

Subsidiary of PETTIBONE MULLIKEN CORP., Chicago, Illinois

A Bright Future

OFFICIAL government outlook estimates that the volume of construction activity during 1955 will establish another all-time record for the tenth consecutive year are based on sound reasoning.

The Departments of Commerce and Labor have estimated that the value of new construction next year may reach \$39.5 billion, 7% above the record breaking \$37 billion indicated for 1954. (Page 23)

Total construction activity, including maintenance and repair operations, of \$20 billion was reached in 1946 to surpass the previous record achieved during the war-time year 1942.

New construction valued at \$16.6 billion was reached in 1947 to exceed the previous peak of \$14 billion of mostly war construction in 1942. Since those years both total activity and new construction have climbed steadily.

In the most recent years the volume of total construction activity has exceeded the value of all agricultural production, which previously had been the largest single activity in the nation. Now \$1 of every \$7 spent for goods and services in the nation is spent for construction.

Construction has been taking an increasingly prominent place in the nation's economy in recent years. With another increase predicted for next year, some people may ask how long the industry can continue to expand its activities.

Reliable studies have indicated a continuing expansion of the industry for the foreseeable future. These studies, and other forecasts for 1955, are based on the assumption of a stable and expanding national economy.

For 1955 most economists seem to agree in principle that the economic trend will be stable or upward. There are reasons to believe that people will continue to spend at a high level, and that there will be sufficient capital funds to finance a large volume of construction.

Surveys have indicated that architects and engineers are at work on plans for an expanding volume of construction. Contract awards give the same indication.

In spite of record expenditures for highways, schools, hospitals, commercial, industrial and public utility construction, residential and other types of work, there are still backlogs of urgently needed projects.

The industry is continually striving for greater efficiency and economy so that the public receives greater value for its investment in construction.

While every section of the country and all contractors will not share equally in the new work coming on the market, there are sound reasons for believing that 1955 can be another record year for construction.

Statistically this may also be an important year for the industry. At a recent construction meeting called in Washington by the Department of Commerce, officials announced the steps which are being taken to further improve the available construction statistics.

The latest results of continuing improvements in the statistics have been to indicate that maintenance and repair operations are much greater than had been estimated previously, and that they probably will increase as the nation's physical facilities are increased.

For the latest year studied the expenditures for maintenance and repair operations amounted to nearly half the expenditures for new construction. Further improvements undoubtedly will reveal that the construction industry is playing an even more prominent role in the national economy than can be shown today.

Don't Throttle Private Works

A SOUND and thought provoking speech on the subject, "Don't Throttle the Private Works Program," was delivered recently by Benjamin F. Fairless, Chairman of the Board, United States Steel Corporation before the Charleston, W. Va., Chamber of Commerce. He said:

"Perhaps you have never thought, in exactly those terms, about the billions upon billions of dollars that individual Americans have invested in job-producing facilities in every field of enterprise; and I am frank to say that I've never heard anyone speak of a Private Works Program before, but that is just exactly what it is."

He pointed out that it takes approximately \$12,000 of capital, on the average, to create a job for one man. Last year American industry poured about \$28 billion into new plants and facilities. That, presumably, created employment for about 2 1/3 million people who otherwise would be out of work.

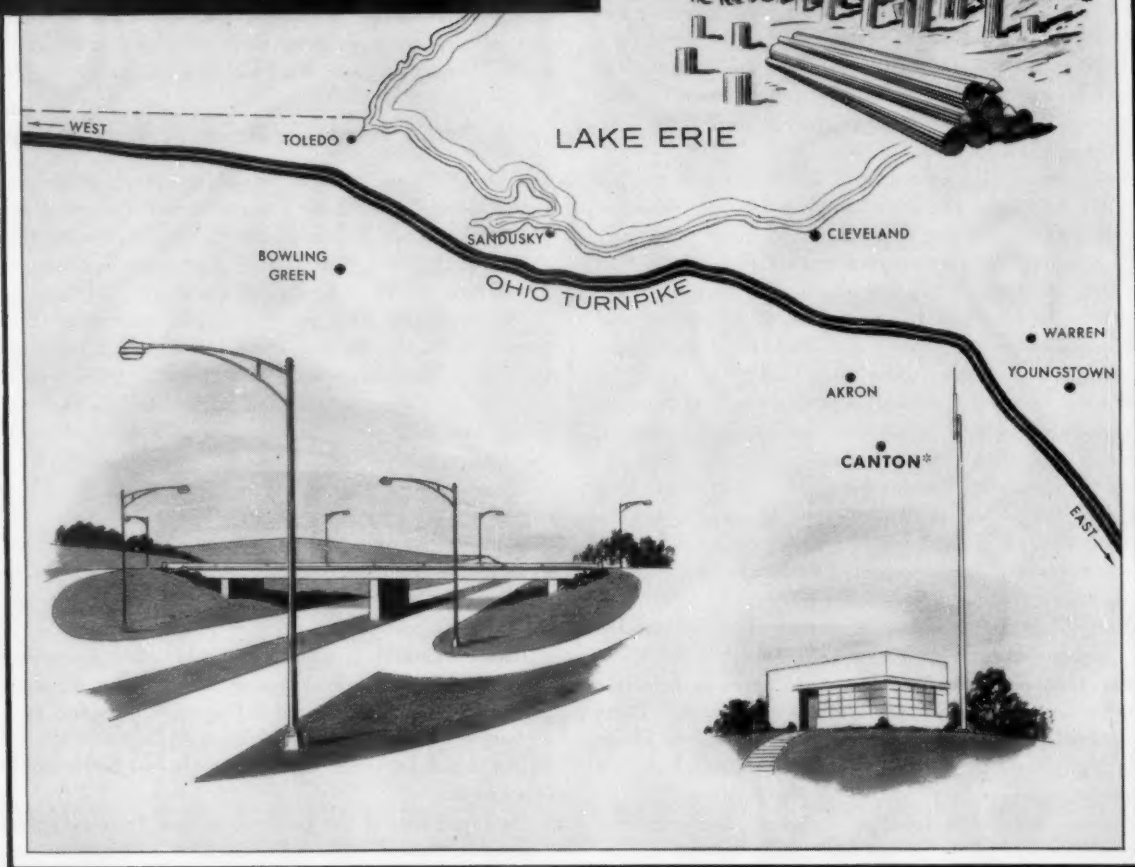
Because there is a school of thought that the government should take the lead in providing jobs for the unemployed, Mr. Fairless sought information on what would be necessary if the government sought in taxes the \$28 billion to provide these jobs which were created by private investment.

He found that if the government took from every taxpayer every penny of taxable income over \$2,000 a year, it still would not raise the money. In other words, with the 20% tax on the first \$2,000 of income, the government would still be \$3 billion short if no man or woman in the country were permitted to keep more than \$1,600 of taxable income. This could lead to the greatest unemployment any nation ever experienced.

The private works program, as he pointed out, does not eat up taxes, but pays them. It not only creates temporary employment in the construction of facilities, but these facilities brought about by capital investment provide for permanent jobs.

If 22 million new jobs are needed in the next 20 years, an investment of nearly \$250 billion is required. Can the government provide these jobs? The answer is obvious that for the best interests of all people the conditions must be favorable so that there can be that much private investment.

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UNION METAL

» THE U. S. Departments of Commerce and Labor issued one of their rosiest construction volume forecasts in years last month, estimating that \$39½ billion of new construction would be put in place during 1955, surpassing the record-breaking \$37 billion volume indicated for this year by about 7 per cent.

That 1954 new construction will reach \$37 billion was assured by the continued high volume registered in November, bringing the 11-month total to \$34.1 billion. It will be approximately 5% above the 1953 volume of \$35¼ billion, according to the agencies, and will mark the 9th successive year that construction activity has established new records.

The 7 per cent increase forecast for 1955 by the usually conservative Commerce Department's Building Materials and Construction Division and Labor Department's Bureau of Labor Statistics would represent the largest annual volume increase in four years.

Assumptions Listed

"The prospect for this increased volume in 1955 is based on the assumption that the general level of economic activity will remain relatively stable, and disposable income of consumers will continue at a record rate," the agencies stated.

"There should be sufficient capital funds available to finance a very large volume of construction at comparatively favorable rates, and it is assumed that construction costs will remain relatively stable. The possibility of significant departures from any of the above assumptions should, of course, be kept in mind when assessing the outlook for construction."

Residential, Commercial Rise

Private construction is expected to rise 7 per cent to \$27.4 billion, with residential activity providing the biggest boost, increasing by 13 per cent to \$15 billion.

Estimating that 1.3 million housing units will be placed under construction, the agencies cited continued strong demand for homes, ready availability of mortgage money, easier credit terms in the 1954 housing legislation, and a trend toward home ownership. Strong influences in demand were attributed to widely distributed assets in the hands of consumers, the movement of World War II veterans to use GI home-loan privileges which expire in 1957, and changing family needs caused by the rising birth rate.

\$39½ Billion in New Construction Forecast by Government for 1955

• This Year's Volume of \$37 Billion Also Record

Record-breaking volumes of commercial, church, private school and hospital construction also are expected, ranging from 7 to 19 per cent above 1954 levels, offsetting a mild decline forecast for industrial types.

Private public utility construction is expected to hold close to the peak levels of the past two years, with increases in pipe line, electric light and power, and telephone and telegraph work offsetting a decline in railroad construction.

Jump in Local Public Works

A steep rise in state and local construction, from the \$8 billion record anticipated this year to more than \$9

billion, is expected to more than offset declines in atomic energy and conservation projects, bringing total new public construction to \$12.1 billion, 5 per cent over 1954.

Highway construction is expected to rise by one-fifth to \$4.2 billion, and public schools by one-sixth, to \$2.4 billion. Sewer and water projects are due to pass the \$1 billion mark for the first time.

Although direct federal construction as a whole is expected to show a further, but smaller reduction next year, military and naval construction, which suffered a 29 per cent drop this year, is slated to increase by 18 per cent in 1955.

Government Estimates of 1954, 1955 New Construction

TYPE OF CONSTRUCTION	1954	1955	%
	(Millions of Dollars) Change		
Total new construction	\$37,000	\$39,500	+7
Private construction	25,525	27,400	+7
Residential building (nonfarm).....	13,305	15,000	+13
Nonresidential building.....	6,140	6,400	+4
Industrial.....	2,000	1,850	-8
Warehouses, office and loft buildings..	955	1,000	+5
Stores, restaurants and garages.....	1,200	1,300	+8
Religious.....	585	675	+15
Educational.....	560	650	+16
Hospital and institutional.....	335	400	+19
Social, recreational and miscellaneous..	505	525	+4
Farm construction.....	1,560	1,450	-7
Public utilities.....	4,400	4,425	+1
Railroads.....	375	325	-13
Telephone and telegraph.....	625	650	+4
Local transit.....	25	25	0
Pipe line.....	300	325	+8
Electric light and power.....	1,900	1,950	+3
Gas.....	1,175	1,150	-2
All other private.....	120	125	+4
Public construction	11,475	12,100	+5
Residential.....	340	250	-26
Nonresidential building.....	4,605	4,450	-3
Industrial.....	1,570	1,050	-33
Educational.....	2,070	2,400	+16
Hospital and institutional.....	350	400	+14
Other nonresidential building.....	615	600	-2
Military and naval facilities.....	935	1,100	+18
Highways.....	3,550	4,200	+18
Sewer and water.....	975	1,050	+8
Miscellaneous public service enterprises..	200	215	+8
Conservation and development.....	720	675	-6
All other public construction.....	150	160	+7

(Joint estimates of the Departments of Commerce and Labor for continental United States.)

Cooperation Is Expected Between Administration and New Congress

• Some Changes in Economic Legislation May Come

» WHAT effect will the change from Republican to Democratic control of Congress have on the national economy and the construction industry?

The general expectation seems to be that the 84th Congress, which will convene on Jan. 5, will bring no pronounced changes in legislative policies affecting the economy. There may, however, be modifications in some areas of economic legislation and shifts of emphasis in some domestic policies. The extent of such changes is highly problematical, for the following reasons:

- While the Democratic leadership may be expected to propose changes in certain legislative areas—taxation, defense spending, public power and other public works, for example—the Democrats' margins of control are not large. The line-up in the House is 232 Democrats to 203 Republicans, a fairly modest majority. The Democratic margin in the Senate is extremely narrow—48 Democrats to 47 Republicans, and one independent (Senator Wayne Morse of Oregon), who has said he would vote with the Democrats on organization of the Senate, and who, on the strength of his voting record and political views, may be expected to side with the Democrats more often than with the Republicans on legislation.

- The Democrats differ considerably among themselves on matters of legislative policy, and on some subjects the voting is not likely to follow party lines very closely. There are two wings of the Democratic party, just as there are two factions in the Republican party. On some issues the predominantly conservative Democrats from the South are likely to be found, as often in the past, voting with conservative Republicans. Similarly, liberal Republicans often line up with the liberal Democrats on legislation.

- Democratic chairmen of congressional committees will not always see eye to eye on the same issue. For instance, Rep. Jere Cooper (D-Tenn.), slated to be chairman of the House Ways and Means Committee, fought for increased income tax exemptions in the last Congress, while Sen. Harry F. Byrd (D-Va.), prospective

chairman of the Senate Finance Committee, opposed an increase in exemptions.

- President Eisenhower has the power of the veto to use as a check on legislation unacceptable to him, and the Democrats do not have the necessary two-thirds majority to override a veto, on a party-line vote.

In view of these factors, and expressions from leaders of both parties, it is reasonable to expect that sustained efforts will be made to preserve a spirit of cooperation between the Democratic Congress and the Republican Administration.

President Eisenhower said at a press conference after the election that he intended to get along with the Democratic-controlled Congress despite differences in political faiths, but that he did not plan to depart from his middle-of-the-road course. Several Democratic spokesmen have predicted that the new Congress will cooperate with the President.

What May Affect Construction

Possibilities of legislation affecting the construction industry as a result of the shift in party control of Congress include the following:

Taxation.—Rep. John D. Dingell (D-Mich.), member of the House Ways and Means Committee, has announced he will seek repeal of the tax exemption on income from stock dividends and enactment of higher exemptions of at least \$100 for all taxpayers and their dependents.

Military Appropriations.—Sen. Stuart Symington (D-Mo.) has predicted an increase in military appropriations, saying: "The growing menace of Communism will never be defeated by a balanced budget."

Power Policy.—Sen. James E. Murray (D-Mont.), prospective chairman of the Senate Interior and Insular Affairs Committee, has said Democrats will seek to "get the federal government back in the business of building big dams which couldn't be handled by private enterprise." The committee will prepare legislation to block private development of Hell's Canyon dam site on the Snake River in Idaho, he said.

New Committee Chairmen

On these pages are shown the Democrats who are in line for the chairmanships of House and Senate committees and joint congressional committees of the 84th Congress which are concerned with areas of legislation of particular interest to the construction industry.

APPROPRIATIONS



Hayden



Cannon

ARMED SERVICES



Russell



Vinson

BANKING AND CURRENCY



Fulbright



Spence

INTERIOR



Murray



Engle

JUDICIARY



Kilgore



Celler

LABOR



Hill



Barden

PUBLIC WORKS



Chavez



Buckley

TAXATION



Byrd



Cooper

JOINT COMMITTEES



Sparkman



Anderson

Public Works.—Sen. Price Daniel (D-Tex.) advocates appropriations for domestic public works programs, especially flood control and navigation, at the expense of foreign aid. Reclamation and conservation may be expanded.

Public Housing.—Democrats are generally more sympathetic to public housing than Republicans, and new congressional committees may favor an expanded public housing program.

Labor.—Not much change is expected in labor legislation, though attempts to amend the Taft-Hartley Act may be expected.

Chairmen of Committees

Of the 19 standing committees in the House, eight are concerned with areas of legislation of particular interest to the construction industry. Eight of the 15 standing committees of the Senate deal with the same legislative areas. Two of the various joint congressional committees are concerned with legislation affecting construction.

When the 84th Congress is organized in January, the Democrats who were the ranking minority members of committees in point of seniority in the Republican-controlled 83rd Congress will be in line for the committee chairmanships. Committee chairmen have much power and influence over legislation, since they largely determine which bills will receive committee approval and pilot them in floor action.

The prospective Democratic chairmen of the House and Senate committees having to do with legislation of particular interest to the construction industry, with indications of their viewpoints, are as follows:

Appropriations.—Rep. Clarence Cannon (Mo.) resumes the chairmanship of the House Appropriations Committee, which he held in five previous Democratic Congresses. He has the reputation of dealing closely with appropriation requests, but is considered more generous than his Republican predecessor, Rep. John Taber (N. Y.).

Sen. Carl Hayden (Ariz.), new chairman of the Senate Appropriations Committee, is keenly interested in the development of the West through reclamation. He favors public power as opposed to the Administration's power policy of federal "partnership" with private interests.

Armed Services.—Rep. Carl Vinson (Ga.) again takes over the House

Armed Services Committee which he headed in the 81st and 82nd Congresses. He is an ardent champion of a big Navy and a big Air Force. He also has advocated universal military training.

Another Georgian, Sen. Richard B. Russell, will return to the chairmanship of the Senate Armed Services Committee, which he headed in the 82nd Congress. The acknowledged leader of the Southern bloc of senators, he may be expected to favor larger appropriations for the military.

Banking and Currency.—Rep. Brent Spence (Ky.) will become chairman of the House Banking and Currency Committee, which he first headed in 1943. He is a strong supporter of public housing, which comes under his committee, and may be expected to seek larger housing program authorizations.

The Senate Banking and Currency Committee will be headed by Sen. J. W. Fulbright (Ark.), who also is expected to advocate more public housing. As chairman he will lead the probe into housing "windfall profits."

Interior.—Rep. Clair Engle (Calif.), a champion of reclamation and power development, is prospective chairman of the House Interior and Insular Affairs Committee. A former chairman of the Irrigation and Reclamation Subcommittee, he said recently: "We will offer a constructive and vigorous program for Western water and power development in hope that we will have the cooperation of the executive agencies. We're going to build. We want less talk and more cement and steel."

Sen. James E. Murray (Mont.), incoming chairman of the Senate Interior and Insular Affairs Committee, is also a strong advocate of public power. His committee is expected to handle a "gigantic development program" for natural resources which Senate Democratic Leader Lyndon Johnson (Tex.) has said will be submitted to the new Congress. Murray was chairman of the Senate Labor Committee in the 82nd Congress.

Judiciary.—Rep. Emanuel Celler (N. Y.), who was chairman of the House Judiciary Committee in the 81st and 82nd Congresses, will return to that post. He is known as a liberal.

Sen. Harley M. Kilgore (W. Va.) will be chairman of the Senate Judiciary Committee. Like Celler, he is identified with the liberal wing of the Democratic party.

(Continued on page 26)

(Continued from page 25)

Labor.—Rep. Graham A. Barden (N. C.) will resume the chairmanship of the House Education and Labor Committee, which he held from June 1950 to January 1953. He is regarded as a conservative Southern Democrat, and labor leaders do not consider his voting record friendly to unions. In 1950 he helped to block a bill for federal aid to education by his stand against granting funds to private and parochial schools.

A liberal Southerner, Sen. Lister Hill (Ala.), will head the Senate Labor and Public Welfare Committee. He may be expected to favor revision of the Taft-Hartley Act along lines more acceptable to labor. He has been an advocate of increased federal funds for education, and was the author of the unsuccessful bill for federal retention of tideland oil to finance aid to schools.

Public Works.—Rep. Charles A. Buckley (N. Y.) will return to the post of chairman of the House Public Works Committee which he held in the 82nd Congress. He is a liberal Demo-

crat. His experience includes 20 years in the construction industry. He has advocated legislation to provide federal aid for construction of city streets and may be expected to take a favorable attitude toward President Eisenhower's proposal for an expanded highway program.

Sen. Dennis Chavez (N. Mex.), as chairman of the Senate Public Works Committee, is also expected to support the President's highway proposal. He is a champion of the development of natural resources and is likely to seek more funds for flood-control projects and other public works. He was chairman in the 82nd Congress.

Taxation.—The new chairman of the House Ways and Means Committee, Rep. Jere Cooper (Tenn.), was one of the leaders in the fight in the last Congress to increase income tax exemptions. He strongly opposed the provision in the new revenue law allowing deductions on stockholders' income from corporate dividends. He has supported the reciprocal trade program.

Sen. Harry F. Byrd (Va.), ardent advocate of economy and a balanced budget, will be chairman of the Senate Finance Committee. He opposes tax reductions when there is a federal deficit. He voted against substituting a higher income tax exemption for dividend tax credits. He favors extension of the reciprocal trade program.

Joint Committee.—Sen. Clinton P. Anderson (N. Mex.) will head the Joint Atomic Energy Committee, which is expected to investigate the Dixon-Yates power contract and the Administration's atomic energy program. Anderson is regarded as a strong supporter of public power.

Sen. John J. Sparkman (Ala.), known as a liberal and a staunch friend of small business, will be chairman of the Joint Committee on the Economic Report. The committee may be expected to make a critical study of the Administration's unemployment figures and the President's 1955 Economic Report to the Congress.

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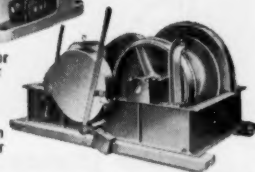
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» LAST month's general elections demonstrated continuing popular support for bond-financed expenditures to cut down some of the heavy backlog of urgently needed state and local public works projects.

Indications from available reports are that more than \$1 billion in bond issues for public works was approved by voters on city, state and county referendum ballots. This is substantially more than the \$800 million approved in the 1953 off-year elections, and approaches the record \$1.3 billion in 1952.

Heavy emphasis was placed on schools and institutional building, and, in the case of New York, slum clearance and housing projects.

Institutional Building

The largest single bond issue authorized was \$350 million for New York state bonds to finance mental hospitals, with the bonds to be retired in 10 years from cigaret and income tax revenue now used for payment of veterans' bonus bonds.

Rhode Island voters authorized state bond issues totaling \$7.1 mil-

An Associated Press dispatch, carried in many newspapers throughout the country, quoted H. E. Foreman, managing director, The Associated General Contractors of America, on the significance of the record level of bond issues approved by voters in the last three elections.

The results, he stated, "reflect a growing recognition of the tremendous needs for community facilities adequate to serve the everyday civilian needs of an expanding population . . . The construction of state and local public works as the increasingly dominant factor in total public construction is indicative of generally healthy economic conditions in states, counties and municipalities, and is playing a large part in the important role now being exercised by the construction industry in the national economy."

He said this sector of activity, the rapid population growth of 2.7 million per year, and the ever-unfolding "new horizons" for industry, such as plastics, chemicals, electronics, and atomic energy, are three factors considered by the A.G.C. as favorable for a high volume of construction for years to come.

Voters Continue to Endorse Big Bond Issues

• Over \$1 Billion Approved for Projects in General Election

lion for the state's College of Education, a mental hospital, and a central state vocational school.

Montana approved \$3.5 million for a mental hospital and the state training school, New Mexico okayed \$4.5 million for educational institutions, and Texas voters removed restrictions on the surplus in the state's Confederate pension fund to release about \$6 million for buildings.

Cincinnati, Ohio, voters approved \$3 million for the county home and \$2.2 million for the University of Cincinnati.

New Jersey voters rejected a proposal to authorize issuance of \$25 million in bonds to construct a new state medical and dental college.

California Emphasizes Schools

California voters gave the green light to issuance of \$100 million in state bonds to aid local school districts in building. This will be in addition to issues of \$250 million and \$185 million authorized in 1949 and 1952, respectively. Besides the state school bonds, local bond issues for schools were approved in many California communities, including a \$32.5 million issue by Long Beach.

Among other municipal bond issue approvals for schools were \$20 million by Baltimore for 11 projects; \$15 million by Cincinnati; \$4.9 million by Springfield, Ill., and \$3.7 million by Sandusky, Ohio.

Miscellaneous Projects

The New York electorate voted an additional \$200 million bond issue for slum clearance and housing projects, and Baltimore voters approved \$5 million for slum clearance.

In Colorado, a state constitutional amendment was approved authorizing \$35 million in anticipation warrants for highway construction.

Louisiana voters defeated a proposal to validate a \$50 million highway bond issue approved earlier by the legislature, and North Dakota voters rejected measures seeking to raise highway construction revenue.

In Wyoming, voters heavily favored an amendment to earmark all highway user taxes for construction of highways and administration of the motor vehicle code, but whether the required number of votes to carry the

measure was cast was not readily determined.

In New York, Westchester County voters authorized \$14.8 million in bonds for a new sewage treatment plant, and in Ohio, Cincinnati voted issues totaling \$9.3 million for miscellaneous public works.

Generally, the scattered instances of major bond proposal rejections were accompanied by complicating factors and should not be interpreted as real voter sentiment favoring curtailment of projects.

Special elections are being called frequently to vote on bond issues in various parts of the country.

For instance, voters in Dallas, Texas, and Stockton, Calif., this month will consider bond issues of \$35 million and \$7.5 million, respectively, for school construction, and Michigan Gov. G. Mennen Williams plans to ask for a vote on a \$500 million bond issue for highway modernization on the spring election ballot.

Industry-Commerce Meeting

Development of the nation during the past 100 years was relatively insignificant compared to what lies ahead under advances in atomic power and electronics, Under Secretary of Commerce Walter Williams told a construction industry group last month.

Thirty-four representatives of construction and building materials firms and their trade associations met in Washington under auspices of the Business and Defense Services Administration of the Commerce Department to discuss matters of particular interest to the industry.

Conferees were welcomed by Secretary of Commerce Sinclair Weeks, who expressed optimism about the business outlook for 1955.

Progress made in developing more reliable statistics on the construction industry was reported by Walter W. Schneider, Chief, Construction Statistics, Building Materials and Construction Division.

The Associated General Contractors of America was represented by Managing Director H. E. Foreman and by Past President M. W. Watson, Topeka, Kansas, who also represented the U. S. Chamber of Commerce.

A Practical Approach to Construction Education

By W. T. Hosmer

Associate Professor, Civil Engineering, Iowa State College

» FOR a good many years a considerable number of both educators and men in industry have thought that instruction in matters pertaining to construction should be included in a civil engineering curriculum. Those of us at Iowa State College who are directly concerned with the development of construction courses are of the opinion that such courses can be justified only if they are kept within proper bounds.

We have three construction courses, namely: engineering construction, highway construction and heavy construction. Engineering construction is a required course and the other two are elective.

In developing our construction program certain facts were immediately recognized and followed:

Know-How From Experience

1. The number of subjects pertaining to construction which can be properly taught in college is quite small. So much of the contractor's know-how comes from field experience and is not to be had anywhere else. Unless we stick to the proper subjects and, in some cases, do not attempt to pursue the subject too far, we will be in the position of kidding our students. That we must not do.

2. In selecting subject matter for courses the best place to look for help and guidance is the construction industry.

We have turned to our many friends in the Iowa Section, A.G.C., for help. That help has been eagerly and skillfully given and has now resulted in a

planned and continuing program of cooperation between the civil engineering staff and the contractors of Iowa. It has come about in this way.

In 1950, largely at the instigation of O. W. Crowley, executive secretary, A.G.C. of Iowa, a student guidance committee of the chapter was formed. The principal duties of this committee are to assist in the development of the engineering construction course. This course was chosen because it is required of all our students.

Each year early in October a dinner meeting is held by professors L. O. Stewart, L. H. Csanyi, myself and the student guidance committee. At this meeting topics to be presented, dates of presentation and lecturers are decided for the ensuing school year.

Three times each quarter during the weekly three-hour laboratory period the A.G.C. lecturers appear before our students. The custom to date has been to use from one to three lecturers at one time. This number went up to five at our last meeting. Quantity take offs, the construction industry, elements of construction costs, construction equipment, and the mixing and placing of concrete have been some of the topics discussed.

The three-hour periods have been conducted in several ways. We have started off with the lecture followed by a question and answer period. In several cases we have given the students an assignment to be worked on during the period under the contractor's supervision. An example of this is the meeting at which a Des Moines contractor put the students to work

taking off quantities for a large job his company was bidding. This man probably used his own quantities in bidding but he told the boys how to go at the job and pointed out to them that they were doing their work in the same way it was done in his office.

On two occasions our visiting instructors have divided the class into small groups and had each group prepare a bid for a small project. These meetings with our contractor friends have been well received by our students.

Seeds of Good Relations

Aside from its educational value, there are, perhaps, other things to be gained in having our young engineers meet with contractors. Good relations between engineers and contractors is a part of good engineering and of good contracting. Maybe a few seeds can be planted in the classroom which will someday blossom forth into good relationships and a savings in money on many a project.

As has been stated before, we and our contractor friends are now three years along in this joint venture. We have made some mistakes but we are progressing. There are further improvements to be made in our program.

We lay no claim either to originality or fame for what we are trying to do. It has been our thought from the beginning that the advice and help from men in the industry will, among other things of course, make our construction course more beneficial to our students.



Members of the Engineer Relations Committee, A.G.C. of Iowa, who appeared before an Iowa State civil engineering class in a panel program, are, left to right: Ray Stevenson, Alfred Olson Co., Waterloo; James Brown, Hoak Construction Co., Des Moines; R. F. Teehlenberg, R. B. Burch Co., Inc., Cedar Rapids; G. F. Diesch, Diesch Constructors, Waterloo; Sidney Smith, Sidney B. Smith Co., Des Moines; R. N. Zack, A.G.C. of Iowa staff; and the author, Prof. Hosmer.

»THE National Labor Relations Board, which has been criticized by union officials as having a pro-management bias, has recently decided a number of cases involving secondary boycotting in construction in which management can find little comfort.

In the *Pittsburgh Plate Glass case* (Atlanta) (10-CC-62), the board ruled that its usual precedent established in "roving situs" picketing does not apply to picketing of a multi-employer construction site. Although the Pittsburgh Plate Glass plant (wherein the dispute existed) and the construction site were in the same community, the board ruled the disputing union need not limit its picketing to the plant but could extend its picketing to the construction site on which Pittsburgh Plate Glass was doing some subcontracting work.

In the *Columbia Southern Chemical Corp. case* (110 NLRB 25), the board ruled that the secondary boycott provisions of the Taft-Hartley Act do not prohibit disinterested unions from taking sympathetic action in aid of a disputant union. The board held that the secondary boycott provisions of the act were not intended "to protect primary employers against pressures by disinterested unions but rather to protect disinterested employers against direct pressures by any union".

In the *Stover Steel Services case* (108 NLRB 221), the board held it is lawful to picket a multi-employer construction site (without indicating which employer was the object of the picketing) in an effort to organize non-union construction workers, even though the picketing caused union employees of a subcontractor to walk off the job.

The decision has caused comment because the board overruled a trial examiner's report that the picketing and walkout were unfair labor practices under past board precedents and Supreme Court decisions. This case, however, has been appealed to the courts.

The Stover Steel decision was quickly hailed by some union officials as approving organizational picketing and as a solution to a problem they have found difficult: how to lawfully organize a given construction project.

The Stover Steel decision reads, in part, as follows:

"In March 1953, the Respondent Council embarked on a campaign to

New NLRB Approach to Secondary Boycotts

• Secondary Employer Denied T-H Protections in Steel Case

organize all unorganized employees on various building projects in the Baltimore area. As preliminary to the organizing campaign, it sought legal advice on how it might engage in picketing without violating the Taft-Hartley Act. Thereafter, members of the Council's affiliated locals were informed in membership meetings by their business representatives or by delegates to the Council that the Council was going to conduct an organizing campaign, but they were not told when the campaign would start, and they were given no directions, instructions, or advice concerning their obligations or conduct with respect thereto. On the morning of March 25, 1953, the Council placed pickets at the entrances to a number of building projects, including the Claremont and Jessups jobs involved herein. The pickets were given for guidance, a card entitled, 'Helpful Hints for Pickets,' which informed the pickets that their purpose was to organize the unorganized, that they were to patrol the premises peaceably and carry at all times the signs given them, that they were to hand out authorization cards and handbills to anyone who wanted them, and that they were to encourage non-union workers to join unions affiliated with the Council. The pickets were furnished, for distribution to inquirers, with cards authorizing the A.F.L. and 'all affiliated organizations' to represent the signatories, and with a printed leaflet which contained statements by various churches regarding unionism. The pickets carried signs which stated that the job was being picketed for the purpose of organization, and inviting employees to join their A.F.L. craft union. The pickets conducted themselves strictly in accordance with their instructions. They made no attempt physically to bar the entry of employees into the project, nor did they accost or attempt to persuade employees not to enter or not to work. So far as is shown by the evidence, one or two pickets at each project simply patrolled the entrances, handed out authorization cards when requested, and answered inquiries by stating that the Council was conducting an organizing campaign. The effect of the picketing was that most of the already unionized employees on the projects

being picketed refused to cross the picket line."

"The difficulty of differentiating the two types of activity in this case arises from the fact that the primary employers with whom the dispute exists and the neutral employers occupy the same job situs. In this situation the Board recognizes that the traditional right of a union to picket at the location of a labor dispute and the competing right of a neutral employer to be free from picketing in a controversy in which it is not directly involved cannot be absolute. The problem is one of balancing rights. When the picketing union by its picketing signs or by its conduct on the picket line or elsewhere indicates that the dispute extends beyond the primary employer, and thereby directly seeks to enlist the active participation of employees of neutral employers, the picketing union violates the secondary boycott provisions of the Act. On the other hand, if the picketing union by its signs and conduct does indicate that its disagreement is only with the primary employer, its conduct is primary and lawful even though employees of neutral employers may of their own volition refuse to cross the picket line and thereby exert pressure on the primary employer. These secondary effects of legitimate primary picketing must be regarded as incidental in the light of the legislative history of the Taft-Hartley Act.

Trial Examiner Overruled

"The trial examiner found that the picketing violated Section 8 (b) (4) (A) of the act. He reasoned that, although the Respondents did not call for such action by way of instructions, pickets or picket signs, they expected that many union members would refuse to cross the picket line and it was therefore 'incumbent upon them to take affirmative action to negative the inducement which the mere existence of the picket line constituted, by ordering the men back to work.' We do not agree with this reasoning of the trial examiner. Logically applied, it would outlaw substantially all primary picketing. Yet the legislative history of Section 8 (b) (4) (A) is clear that by that section Congress intended to make unlawful only secondary boy-

Hollow precast concrete post-tensioned arches!



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At Oceana, Va. Naval Air Station, the roof of the aircraft maintenance hangar was constructed of eleven parabolic precast concrete arches containing voids formed by SONOVOID Fibre Tubes. Each arch spans 150' and was cast in two sections (illustrated). Each section: peripheral length 82', width 1'9", depth 3', weight approximately 22 tons. Lifted into place with cranes and bolted together to form complete arch. SONOVOID Fibre Tubes of 4", 11" and 13.35" O.D. were used to save reinforcing steel, reduce dead weight and save concrete.

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cotts and secondary strike activities and not conduct 'which was traditional and permissible in a primary action.' The question to be decided therefore is whether the picketing followed herein was traditional primary activity or secondary activity proscribed by Section 8 (b) (4) (A).

Case Dismissed

"In the present case, the picket signs indicated clearly that the picketing was for the purpose of persuading the nonunion men on the project to join the union. The conduct of the pickets was consistent with the legends on the signs they carried. They made no attempt to persuade employees not to go to work, but handed out authorization cards when asked for the same and responded to inquiries by stating that the Council was engaged in an organizing campaign. There is no evidence that the Respondents were engaging in secondary picketing under the guise of conducting an organizational campaign. There is also lacking any substantial evidence that away from the picket line the Respondents instructed or attempted to persuade the unionized employees of secondary employers to respect the picket line. In these circumstances, we hold, contrary to the trial examiner, that in their picketing the Respondents were engaged in lawful primary activity and did not violate Section 8 (b) (4) (A) of the act. We shall therefore dismiss the complaint."

Other NLRB decisions held that:

... An employer under the Taft-Hartley Act is required to bargain collectively with respect to an employee stock purchase plan which the company had put into effect unilaterally. An appeal to the courts is pending. *Richfield Oil*, 110 NLRB 54.

... Membership in an employer association will be taken into account in deciding whether the board will exercise jurisdiction over a construction contractor. In this case, which involved a discrimination charge arising out of the association agreement, the contractor alone did only \$25,000 in business out-of-state, while the new yardstick requires a direct yearly out-flow minimum of \$50,000. But the board exercised jurisdiction on the basis the entire membership of the association, to which the contractor belonged, did the required volume of interstate business. *Insulation Contractors of Southern California*, 110 NLRB 105.

» THE Dallas Chapter, The Associated General Contractors of America, which has won three first-place and one second-place safety awards from the national association in the past four years, made a long stride in keeping its position of leadership among small chapters, when it staged a safety carnival, Oct. 16, on the campus of Southern Methodist University, Dallas.

Designed to supplement the two annual safety schools sponsored by the chapter in the past two years, the carnival was made up of six safety "stations" spotted about the university's broad campus. At each station were continuous demonstrations, including lectures and safety methods applied to various pieces of machinery and equipment used in construction.

Some 250 contractors, subcontractors, superintendents and foremen attended the safety carnival and were briefed on each station subject displayed. The stations, numbering one to six, covered the following subjects: ladders and scaffolds, cranes, material hoists, good job housekeeping, use of electrical tools and equipment, and first aid. The local Red Cross Chapter provided nurses and first-aid experts who demonstrated how to handle emergency accident victims.

Official sponsor of the carnival was the Dallas Construction Industry Safety Council made up of two representatives from the Dallas A.G.C. Chapter, one subcontractor, and three union and insurance representatives.



Carnival committee members demonstrate use of material hoist with safety device.

Dallas Chapter Sponsors Safety Carnival

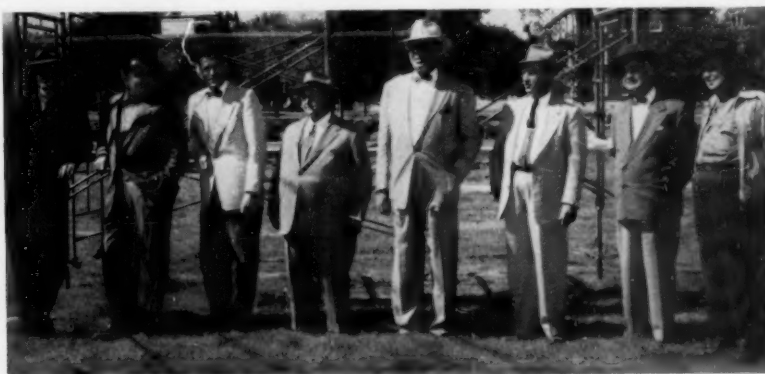
- S.M.U. Campus Scene of Safe Construction Demonstrations



Safe operation of a large construction crane is demonstrated by Floyd S. Oldt, F. S. Oldt Co., Dallas, at one of the carnival's safety "stations."



Superintendents and contractors inspect display of apparel and equipment at safety station adjacent to home stadium of university's Mustang football team.



Members of the Dallas Construction Industry Safety Council, which officially sponsored the carnival, are shown above, left to right: Julian Capers, Jr., managing director of the chapter; Edmund G. Peterson, Peterson Construction Co., chairman of the carnival committee; Jed Howie, E. E. Farrow Construction Co.; L. E. Dilley, secretary of the Dallas Building Trades Council; George Terrell, business agent of Local 481, Iron Workers Union; A. J. Christian, business agent, Carpenters Union Local 198; J. B. Graffeo, Travelers Insurance Co.; and L. E. Moss, safety engineer, Texas Employers Insurance Association.

Memphis Chapter Firms Win Safety Awards



Mr. Hardin, center, pauses after the banquet with eight winners of safety plaques for no lost-time accidents shown left to right: George A. Fulghum, George A. Fulghum Co.; John Cassidy, John Cassidy Construction Co.; H. P. Seavy, Mississippi Valley Engineering and Construction Co.; W. L. Sharpe, W. L. Sharpe Contracting Co.; Mr. Hardin; J. R. Brooks, Jr., R. F. Creson and Co.; Robert C. Crouch, Robert C. Crouch and Co.; Robert L. Irwin, building contractor; and J. Walter Jones, Jr., Wessell Construction Co. Firms and individuals also winning, but not in picture, were the United Construction Co.; Barnett and Madewell Construction Co.; P. W. Jameson; Fred Young; P. C. Mock Construction Co.; Bryson and Ward; and Dunn, Baskin and Dunn.

» THE Memphis Chapter of The Associated General Contractors of America, at its annual dinner meeting Sept. 16, honored members who had unusually safe constructions records last year.

Given at the Gayoso Hotel, Memphis, the banquet had as its special guest Ira H. Hardin, Ira H. Hardin Co., Atlanta, vice chairman of the national A.G.C. Accident Prevention Committee, who presented awards to

representatives of nine firms.

Fifteen safety plaques were presented to firms who had no lost-time accidents, and loving cups were given to winning firms in the three divisions of the chapter's accident prevention campaign. The campaign ran from July 1, 1953 to July 1, 1954.

This chapter is very active in accident prevention and each year many of its members receive national recognition by winning safety plaques and



Harvey Padgett (right), O'Brien and Padgett, receives loving cup from Mr. Hardin for winning the second division of the chapter's safety campaign. Other loving cup winners are shown in the group picture: H. P. Seavy, third from left, first division; and W. L. Sharpe, fourth from left, third division. Mr. Padgett is chairman of the chapter's accident prevention committee.

certificates from the national A.G.C. based on their records compared with other firms throughout the country.

Austin Chapter of the A.G.C. conducted a safety school for construction personnel on successive Tuesdays, Oct. 19, Oct. 26 and Nov. 2. Staffed by safety engineers from insurance companies, the school offered the latest films and training devices.

Chapter Dinner Stresses Highway Safety

- Superintendents Attend Semi-Annual Affair in Pittsburgh



State Police Sgt. Thomas A. Dougherty, an expert on highway safety, addresses some 200 superintendents and foremen who attended the chapter's semi-annual dinner at the Roosevelt Hotel, Pittsburgh. Also seated at the table are, left to right, Harry J. Kirk, manager of safety department, national A.G.C.; Levi B. Duff, director of Allegheny County Department of Public Works; Sergeant Dougherty; S. D. Webb, vice chairman of the group's Accident Prevention Committee, Chapter President William R. McQuade; and Samuel L. Abernathy, safety director of Allegheny County.

» THE Contractors Association of Western Pennsylvania, A.G.C., held its semi-annual safety banquet in Pittsburgh Nov. 5 with more than 200 superintendents and foremen present.

Special emphasis was given to highway safety by the evening's program which included remarks on traffic safety by Sgt. Thomas A. Dougherty of the Pennsylvania State Police and a showing of the new movie "The Perfect Crime," produced jointly by the A.G.C. of Minnesota and the Caterpillar Tractor Co.

Sergeant Dougherty told the gathering at the Roosevelt Hotel that better traffic safety measures need to be put into effect on the highways.

"The Perfect Crime," a 20 minute sound-color movie, is narrated in the language of construction men, but is also suited for use outside of the construction field. The movie depicts unheralded "crimes" being committed each day on the nation's highways and shows the public's apparent lack of interest in reducing the death toll.

SHOVEL-CRANE REPORT ON THE OHIO TURNPIKE

Sub-contractor Al Johnson Construction Co., Minneapolis, Minnesota, uses a 30-ton Lorain Moto-Crane, model MC-524, on their contract to dig footings for the 154 ft. Black River Bridge in Elyria. All in all, they have purchased seven Lorains.

MORE THAN 50 LORAINS SO FAR ON ALL PHASES OF CONSTRUCTION

A Lorain took the first bite of earth at the ground-breaking ceremonies for the Ohio Turnpike. Since then, more than 50 additional Lorains have gone to work to rush completion of this vast 241-mile super-highway by October, 1955. Lorains of all sizes and types—shovels, cranes, clamshells, draglines, hoes—on rubber-tires and crawlers (up to 61 tons capacity)—are fitting the needs of a long list of big-name contractors on this big job. In the rubber-tire class alone, Lorain Moto-Cranes outnumber all other makes combined.

Your jobs may not be Turnpikes, but you, too, can profit by the same Lorain advantages so well known to men that must beat the *big* deadlines at a profit. See your nearby Thew-Lorain Distributor now . . . learn all the reasons why a Lorain is your best buy.



More than 25 rubber-tire Lorain Moto-Cranes speed up and down the right-of-way to get work done. Sub-contractor Vogt & Conant, Cleveland, Ohio, 10-time Lorain owner, uses a 20-ton Lorain Moto-Crane to set 15-ton, 60 ft. long steel girders for this overpass. In the background, a 22½-ton, model MC-424 Moto-Crane, owned by Peter Kiewit Sons Co., uses a 1-yd. concrete bucket to pour abutments. Kiewit has purchased 36 Lorains.

A Lorain-820 Shovel, equipped with 2½-yd. dipper, is shown below digging a rock cut on another section of the Ohio Turnpike.



A Lorain crawler dragline handles ditch excavation as part of important drainage construction along 241-mile road.

Harrison Construction Co., Pittsburgh, Pennsylvania, have purchased a total of 55 Lorains. Below, one of their 1-yd. Lorain-50 Hoes digs a trench for a 36" corrugated cross-drain on one of their three contracts that total \$9 million.



OHIO TURNPIKE FACTS AND FIGURES

Estimated quantities:

Earth and rock excavation	29,500,000 cu. yd.
Fill or borrow	46,900,000 cu. yd.
Pavement concrete	7,860,000 sq. yd.
Bituminous shoulder surfacing	5,200,000 sq. yd.
Concrete in structures	582,000 cu. yd.
Steel	171,000 tons

STRUCTURES:

Bridges, drainage, overpasses, etc.	612
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Lorain, Ohio

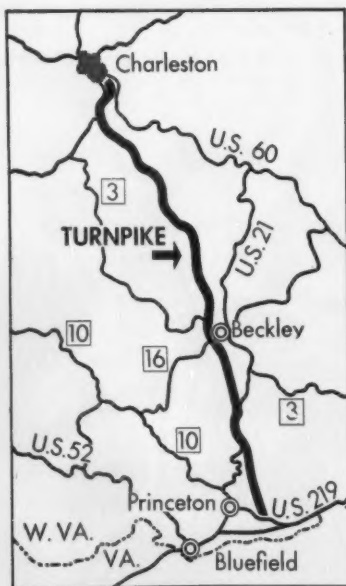
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West Virginia Turnpike: A Salute to Construction Skill

**280 units of CAT* equipment helping
contractors complete \$100,000,000 job on schedule**



A DW21 with No. 21 Scraper, owned by Oman Construction Co., is push loaded on a section of the turnpike near Beckley, W. Va.

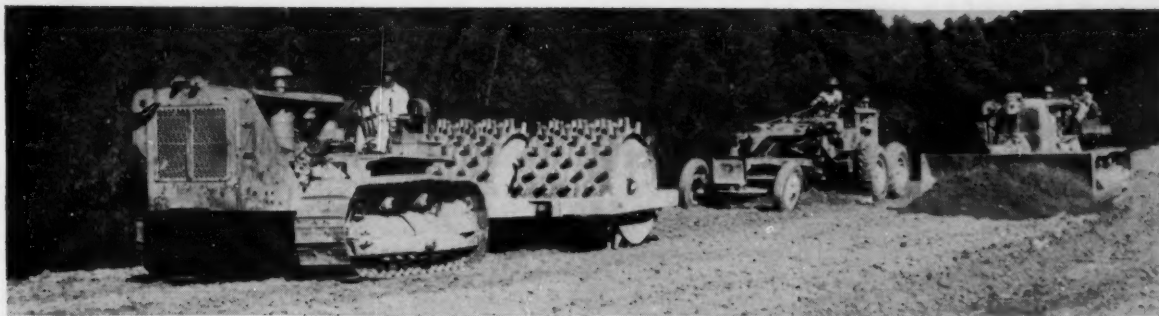


The 88-mile West Virginia Turnpike is expected to be ready for use this fall. Built through mountainous country for most of its length, the project has required moving some 31,000,000 cubic yards of earth for fill. During the spring and summer 3,000,000 tons of crushed rock has been spread in a 14-inch blanket, the full width of the grade, and 1,600,000 square yards of concrete paving have been laid.

This huge earthmoving job has been handled fast. During good weather a million cubic yards a week was the regular rate, and a high percentage of the material was rock.

With a maximum grade of 5 per cent, the new turnpike follows the sides of valleys throughout much of its length. The standard roadway is 50 feet wide, but many miles of extra-width grade have been built to take care of future dualization. Starting at 600 feet elevation in the Kanawha Valley near Charleston, the highway climbs to a maximum of 3200 feet at Flat Top, then descends to 2000 feet at Princeton.

It is expected to cut driving time by half, reducing over a thousand curves in the old road and shortening the distance by 32 miles.



Pulled by a Caterpillar Diesel D8 Tractor, this sheepfoot tamper compacts earth on the Beckley section of the turnpike.



This Cat No. 12 Motor Grader works over new fill while a DW21 wheel Tractor speeds past for another load.



Caterpillar DW20 Tractors with No. 20 Scrapers are used by Clark, Farrell & H. N. Rogers to move earth near Pax, W. Va.



Two big Cat Diesel Electric Sets—a D386 and a D364—furnish all power for this crusher plant, operated by Central Materials Corp., near Kingston, W. Va.

Scores of contractors and subcontractors have shared in this accomplishment. And everywhere along the construction route the famous "highway yellow" of Caterpillar* heavy-duty machines has been in evidence. Included in the equipment are D8, D7

and D6 Tractors, DW20 and DW21 wheel-type Tractors, matching Caterpillar-built Bulldozers and Scrapers, Motor Graders, Cat Engines and Electric Sets powering shovels, compressors, crushers and light plants.

Experienced contractors know ma-

chines built by Caterpillar are money-makers. They can be depended on to stay at work month after month, under all conditions, with a minimum of down time. And when service or parts are needed, they can be supplied by the nearby Caterpillar Dealer.

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Connecticut Contracts Highway Maintenance Work

By G. Albert Hill

Commissioner, Connecticut State Highway Department

» FOLLOWING World War II, portions of Connecticut's highways, like much mileage of those in other states, were in need of maintenance work that could not be carried out in war time.

In attempting to bring our highway system up to standard as quickly as possible, we welcomed the aid of the contracting industry to assist us on those types of maintenance work that lent themselves to contract. Experience has shown us that numerous maintenance operations can be successfully awarded and that highway maintenance by contract is winning increasing favor in Connecticut.

We now contract several types of work that were not awarded a few years ago. The keen competition that prevails today in Connecticut for new construction contracts and the interest shown by contracting organizations in our maintenance program have been important factors in our planning and in the increased emphasis we place on maintenance by contract.

Connecticut has about 3,000 miles of state-maintained roads. In recent years our department has adopted a policy of not employing men who cannot be kept busy throughout the year on needed work. It is also our policy not to maintain extensive equipment that is used but a few days or weeks out of the year and then remains idle for the remainder of the year. In the past the maximum number of trucks used by our department was in the

winter, and many of these units were not required during the summer.

For the past five years, in keeping with our new policy, our department has gradually reduced the number of state-owned trucks by renting contractors' trucks to supplement our equipment during winter storms for both snow plowing and sand spreading for ice control. The main saving to the state has been in not having to employ as many regular drivers and laborers all winter. In the winter of 1953-54 we rented 72 contractors' trucks with two men to a truck. Thus we reduced our payroll by 144 men. During this period, by renting contractors' trucks with crews during snow storms, we saved an estimated \$115,000.

Contractors wishing to rent their trucks to the Connecticut State Highway Department for maintenance work submit hourly rate proposals for:

- Daylight work on weekdays.
- Work at night and on holidays.

The trucks must be accompanied by a competent driver and a helper.

Contractors are allowed to bid on supplying trucks equipped with their own snowplow equipment or they can submit bids for their trucks equipped with state-owned snowplows. The sand spreaders are furnished and maintained by our own department.

A contractor supplying a truck must have the following types of insurance:

- Workmen's compensation
- Contractors' public liability and

This is the eighth in a series of articles describing the benefits of handling highway maintenance work by contract. Reprints are available.

property damage

- Automobile liability

Contractors also supply performance bonds of \$2,500 per truck.

Further information on the procedures we follow in renting equipment for winter work is given by our specifications for renting dump trucks as follows:

"Under each contract the contractor's truck will receive assignments by the general highway foreman and will be called out by him or a subordinate designated by him when needed during snow and ice storms to supplement State Highway Department equipment. Trucks must be ready for use Nov. 1, and must be made available, at the convenience of the State Highway Department repair shops, prior to that date for the mounting of the necessary attachments. Furthermore, the rented trucks must be kept available for plowing and sanding up to April 1 unless the district engineer by readjustment or reassignment of other trucks might be in a position to release any specific truck before April 1. No attachments shall be removed by the contractor without



Contractor's crew (left) puts into place concrete water drain pipe in culvert job underneath one of Connecticut's rural roads. At right, truck crane with clamshell backfills another culvert trench along same road.

the approval of the State Highway Department.

"Rates quoted by each contractor on the attached form must include all truck repairs, fuel, chains, insurance, taxes, operator, and one laborer.

"The state reserves the right to put additional personnel on contractor's trucks as required. The same driver shall be assigned by contractors to each truck at all times except in case of illness. Contractors should be in a position to furnish relief drivers where length of storm warrants same. Trucks shall report with sand for ballast and for sanding as instructed. The state will pay for each cubic yard of sand furnished by contractor in this advance loading at the contractor's bid prices. When instructed by state's representative, contractor will load his truck with sand in advance of storm and will be paid, for this sand, at the prices quoted. Additional sand required during storms by contractor's trucks will be obtained from State Highway Department stock piles or commercial plants, the loading of sand to be done by the contractor's men.

"The rental period will start when the truck reports for work as ordered by the state's representative, and rental period will continue while trucks are actually working and until discontinuance is ordered. Basis of payments for rental of trucks will be the hourly rates bid by contractors. For each truck called out and reporting, the state will guarantee a minimum payment of four (4) hours, which period will include the time the truck leaves the contractor's garage until its return to that garage. After the four (4) hours, time will be computed to the nearest one-half hour. Contractor will be allowed a maximum of two (2) hours to report for work after being called before penalty is made effective. Allowance will be made for each unit for the time enroute from the contractor's garage to the state highway location and for the time of return which allowance will be on an hourly rate, travel time to be agreed upon before units are hired.

"Since trucks are to be rented for the entire winter season, as required during storms, and are assigned to definite locations for plowing and sanding and since the public safety depends upon prompt and



Contractor's truck, with state-owned snowplow attached, clears one of Connecticut's many rural roads. Trucks are rented, with crew of two, for entire winter season, and are assigned definite locations for plowing and sanding operations.



Above is typical section of newly resurfaced pavement completed this year. In 1953 contractors resurfacing projects put into place 24,025 tons of bituminous material, at a total cost of \$649,775, or at an average of \$27.40 per ton. In 1955 the state plans to spend approximately \$1 million for resurfacing roads by contract.

continuous service, there will be a penalty against the contractor, for delays in reporting, up to the maximum number of hours such service is required during each storm. The rate of penalty to be twenty-five dollars (\$25) per hour for each truck for the first two hours, and for each hour thereafter this penalty per hour will be the contractor's rental price per hour per truck. The

penalty will accrue throughout the entire period of the storm until trucks would be normally released.

"There will be no time paid for the trucks while laid up during periods of snowplowing and sanding when this is due to breakdown of contractor's equipment. There will be no payment made for time out for meals, or for meals. There will be no payment made at the be-

ginning of the winter and at the end of the winter for the time required in making installations and removals of snowplows, underframes, sand spreaders, or in making other adjustments on contractors' trucks by the state. Rental time will continue when contractors' men are changing snowplow blades, state to furnish blades.

"Before awarding contracts the state will make inspection of each piece of contractors' equipment to be rented, also make inspection of contractors' repair shop facilities, to be assured that these are satisfactory before contract is entered into. Condition of contractors' equipment, completeness of contractors' shop facilities, availability of contractors' men day and night, Saturdays, Sundays, and holidays, locations in state requiring use of rental equipment, and price will be factors considered in making awards. The state will assign contractors' trucks to highways not exceeding a radius of twenty-five (25) miles from contractors' garage locations."

Last winter 45 different organizations, including many small firms, rented equipment to the state of Connecticut. Generally, one bid opening produces sufficient bids for the work to be done in the several different areas into which the state is divided.

On Aug. 12, 1954, we advertised for bids for rental of adequate trucks for winter operations during the coming winter. Bids were opened Aug. 31, and we received bids from 69 firms.

We have seldom been disappointed by the performance of contractors' equipment on snow removal and ice control operations. At the start of the project calling for rental of contractors' equipment for snow removal we were concerned, but the performance has been excellent and 99% of the time we have been well satisfied with the service secured. Our checking on the condition of the contractors' equipment in advance has undoubtedly been a big factor in obtaining the fine record of performance.

Resurfacing Old Pavements

To extend the life of large mileage of old concrete pavements it has been necessary to resurface them with hot-laid bituminous concrete. The standard thickness is $2\frac{1}{2}$ in. composed of two courses of $1\frac{1}{4}$ in. each. The department's maintenance forces are equipped to do only small emergency jobs. It has, therefore, been necessary to award much resurfacing. On heavily traveled roads where the pavement was only 20 ft. wide we rebuild the shoulder areas to make them sufficiently strong to support the extra width of bituminous concrete necessary for a standard 24-ft. two-lane highway.

General repairs to much of the old concrete pavement has been necessary before it was resurfaced. Much work of this nature has been done by contract.

The following is a summary of the bituminous resurfacing work done by contract during 1952-53:

- 24,025 tons put in place.
- \$649,775.70 total cost.
- \$27.40 average cost per ton in place.
- \$5.46 average cost per square yard.

Resurfacing of old concrete by contract will increase for the next several years. We expect to request \$250,000 for each of our four districts for resurfacing work by contract in 1955.

Extensive postwar real estate developments along Connecticut's state highways have caused the elimination of road drainage outlets in many locations and resulted in numerous cost-sharing drainage improvements. A large amount of this work has been let to contract. In 1953 we awarded \$338,874 of this type of maintenance and about the same amount in this year. These projects have been handled much as new construction contracts. Some of the contract drainage projects have been of small size, costing only about \$10,000, but by letting three or four or perhaps five of these jobs within ten miles as one contract, Connecticut has obtained good prices on this work.

There is still a large deferred list of drainage jobs to be done. It is hoped that we can allot approximately \$200,000 to each of our four districts for each of the next several years for this type of work.

It has been the practice for the past five years to let to contract large bridge repair and painting projects. This practice will continue. These jobs are advertised on a lump sum basis, but the scope of the work for each bridge is shown by a detailed plan with the pounds of structural steel in the bridge indicated.

Special provisions may be an important part of the work of painting existing bridges. For example, in advertising the painting of a structure at East Haddam, a site plan was submitted, the approximate weight of the structure was shown, and special attention was called to the fact that the operator's house on the swing span was to be painted and that the machinery for operating this span was to be cleaned and painted.



Webster and Webster, fence contractors, replace old guardrail posts with creosoted posts on portion of Route 20 near Barkhamsted Reservoir. Note powered fencepost auger at work in background.

This year began a project aimed at the award of the cleaning and sealing of the joints and cracks of existing portland cement concrete pavements. Our department advertised on Oct. 4, for 39 miles (two lane) of this type of work, and bids were opened Oct. 25. Six bidders submitted bids on this work. The low bid was 5 cents per linear foot of joint.

Our proposal called for the work to be similar to the sealing of joints of new pavement and included construction of numerous relief joints. Payment for the cleaning and filling operations will be on the basis of per linear foot of joint. A hot sealing compound will be placed in the crack in two pourings. A cold-applied sealer will be used on about nine miles. Control of traffic and protection of both the traveling public and the contractors' equipment will be on the same basis as on new construction.

Replacing Guardrail

Due to rapid decay of an extensive mileage of untreated painted timber guardrail posts throughout the entire state, it was an impossible task for maintenance forces to make replacement fast enough to keep our highways safe. Work of this nature by contract will continue for the next two or three years until all untreated posts have been replaced with pressure-treated creosoted posts.

The following is a summary of work done by contract in the period from 1951 to 1954:

- 530,933 linear feet of railing reconstructed.
- \$667,125.38 total cost.
- \$1.26 average cost per foot.

During each of the last few years contracts have been let for the removal of trees, which, because of their location or size, were a hazard to the traveling public. Work by our maintenance forces is generally limited to removing dead branches and general pruning. In 1952 and 1953 a total of 775 trees were taken down by contract at a cost of about \$61,000. Tree removal by contract continued in 1954, and is planned for 1955.

The analysis of accidents on our state highways has indicated numerous locations where poor sight line, either vertical or horizontal, has been responsible. A study of such conditions is being made, and it is hoped to allot \$200,000 each year for each of our four districts for contract work to gradually eliminate these hazards.

Conclusions

Based on several years of experience on awarding several types of road maintenance to contractors, conclusions of the Connecticut department are as follows:

- To date we have found maintenance by contract very advantageous. It is advantageous in that we are able to carry out long overdue work more expeditiously, releasing state maintenance

forces for other operations.

- Contract maintenance has been found satisfactory in that the prices have been favorable and the finished work has been of good quality.

- By use of the contract system we have finished work much sooner than would have been possible otherwise.

- The contract method has proven so effective that we are planning to expand the volume of maintenance work awarded contractors.



**SCRUGGS-VANDERVOORT-BARNEY
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Committee Report Due This Month on President's Highway Program

- Clay Indicates Group's Views on Financing
- Bonds Based on Present Taxes May Be Answer

» WITH about a month remaining before the convening of the 84th Congress, to which President Eisenhower intends to submit "positive proposals" for a greatly expanded highway construction program, the President's Advisory Committee on a National Highway Program is rounding out its study

For later developments see page 5.

of highway needs and financing methods this month with a view to making its report to the Chief Executive in late December.

The five-man committee, under the chairmanship of Gen. Lucius D. Clay, retired, conducted public hearings in Washington Oct. 7 and 8 at which testimony was presented by spokesmen of 22 organizations concerned with highway development. (November CONSTRUCTOR.)

At the hearings most of those who testified were agreed on the need for an expanded highway construction program of the size proposed by the President, though there were a few dissents. There was agreement that the chief problem is that of financing.

Methods of Financing

Indications of the committee's thinking on the subject of financing were given by General Clay in an address before the Michigan Good Roads Federation at Lansing on Oct. 25. He said in part:

"It is not our desire to raise taxes; rather, to make use of what we have. Therefore, when it comes to financing, we believe there are four alternatives.

"One is to build toll roads and let the highway users pay for them. Toll roads have their place in present-day construction, but obviously it would be uneconomical to flood the country with toll roads. They are not the answer.

"Another is to construct freeways on a pay-as-you-go basis. This sounds reasonable, yet the construction of today's highways must be done much faster than this type of financing will permit.

"Then there are government bonds

which could be issued, based on general revenues. This would unquestionably raise the national debt, and neither the Administration nor the Congress would like to increase the federal debt.

"So finally we have the federal gas and fuel tax. Certainly we do not propose increasing this tax, but it is possible that these funds could be used to support a bond issue on a 10-year capital asset expenditure. This would provide the federal government's share for highway expenditures. This is no conclusion, by any means; it is made merely as a suggestion."

Size of the Program

President Eisenhower's proposal, made to the Governors' Conference in July, was for an expenditure of \$50 billion on highway construction over a 10-year period in addition to normal outlays. Normal construction under present programs, it has been estimated, would amount to approximately \$50 billion in 10 years.

"Preliminary studies indicate to us that \$101 billion will be needed over the next 10-year period to keep our present road building plans and still prepare for the future," General Clay said. "At the present time, the states and federal government are spending approximately \$5 billion per year. Should this keep up under the present system, we shall have spent \$50 billion by 1965. Yet, with such a tremendous outflow of automobiles and trucks expected in the future, our studies indicate that by 1964 we will have to spend an additional \$50 billion for secondary roads, city streets, as well as the general interstate highway program.

"Certainly a large share of this money will come from the federal government. No one knows how much, but \$25 billion is not too great an outlay, and possibly the figure may even exceed it. These expenditures are necessary from the federal government because previously our interstate system was geared to two-lane highways. This type of highway will not accommodate today's traffic. There-

fore, we must build six-lane interstate highways, the type that will last 25 years into the future."

Building to Modern Standards

Highways to be constructed for the traffic that will develop during the next 25 years should be considered as a capital asset of the nation, General Clay said. He emphasized that the country's economy is geared largely to highways and that satisfactory economic progress depends on adequate roads. Highways should be built to modern standards to meet the greater traffic needs that will develop in the years ahead, he said.

General Clay stressed the importance of improving the 40,000-mile interstate highway system in the next 10 years to standards capable of meeting the requirements of 1979. Planning engineers will have to use great care in designing such roads, he said, to insure that they would not become obsolete before they were worn out.

Governors to Report

A report on another study of the President's highway proposal by the Governors' Conference is expected to be made in December also. A special committee on highways was appointed by the Governors' Conference to study the President's highway expansion proposal and make recommendations. The committee met early last month to consider recommendations, and was scheduled to make its report to the executive committee of the Governors' Conference at a meeting in Chicago Nov. 30. Subsequently the executive committee will submit a report to President Eisenhower.

Among recommendations adopted by the special committee of governors was one proposing that the federal government assume primary financial responsibility for the 40,000-mile interstate system of highways.

Still another study of the proposed highway program is being made by the Chamber of Commerce of the United States. Its Subcommittee on Highway Development met Nov. 30 in Washington to determine what recommendations it will make concerning the position the national chamber should take on President Eisenhower's proposal.

Strong support for the proposed program came from the American Association of State Highway Officials at its annual convention in Seattle Nov. 9-11. (Account of A.A.S.H.O. convention on page 41.)

New Post for du Pont, Curtiss to Succeed Him

Francis V. du Pont announced last month that he would resign as commissioner of the Bureau of Public Roads, U. S. Department of Com-



Mr. du Pont

Mr. Curtiss

merce, effective early in January. He will become a special assistant to Secretary of Commerce Sinclair Weeks to devote full time to President Eisenhower's highway expansion program.

Deputy Commissioner Charles D. Curtiss, veteran official of the bureau, will become acting commissioner.

Long in Highway Work

Mr. du Pont became commissioner on April 1, 1953, after a long career as a highway official in Delaware which won him national recognition as a public roads administrator. He was a member of the Delaware State Highway Department from 1922 to 1949 and its chairman for 23 years. Under his direction Delaware developed one of the most modern highway systems in the country. He was responsible for directing the engineering, financing and commencement of construction of the Delaware Memorial Bridge, fifth longest suspension bridge in the world.

With Bureau since 1919

Captain Curtiss, as he has been known ever since he served as a captain of Army engineers in France in World War I, has a record of professional experience in highway engineering dating back to 1914. He has been with the Bureau of Public Roads since 1919. As deputy commissioner he has been responsible for all finance and management activities of the bureau. Long active in the American Society of Civil Engineers, he was the first secretary of its highway division and served in that capacity for 25 years. He has received several awards for distinguished service.

A.A.S.H.O. Endorses President's Program

• George T. McCoy Elected President of Association

» THE American Association of State Highway Officials expressed strong support of President Eisenhower's proposal for an enlarged highway program in a policy statement adopted at its 40th annual meeting, held Nov. 9-11, at Seattle, Wash.

The statement extended to the President the association's "sincere gratitude for this progressive proposal for the advancement of the highway improvement program to more nearly keep pace with expansion of the American economy." It also tendered to the President, his Advisory Committee on a National Highway Program, the Governors' Conference Highway Committee, and the Congress the "full cooperation" of A.A.S.H.O. in assembling data and information that may be necessary in the formulation of a program of action.

Two Points Advocated

The policy statement advocated these two points:

1. Federal funds for the federal-aid secondary, urban and primary highway systems, less the interstate portion thereof, should be continued in at least the same amounts as at present.

2. A new interstate highway program with the necessary capital expenditures substantially financed by the federal government, with the states responsible for the design and construction, and the states to assume the cost of the maintenance, operation and policing of the system, which is to be constructed to adequate standards as promulgated by A.A.S.H.O. The program should be adopted so that the interstate system and its urban extensions may be completed within a period of 10 years to further the national defense and the peacetime economy.

New A.A.S.H.O. Officers

Officers were elected as follows:

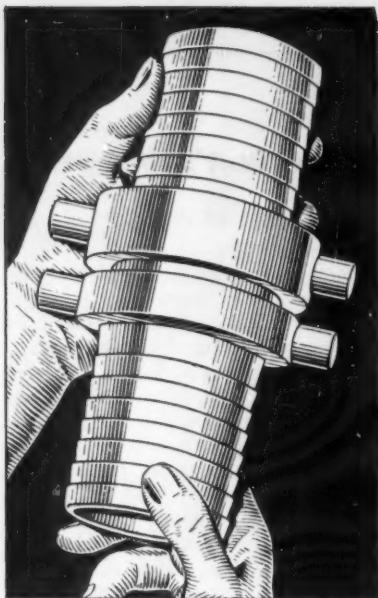
President, George T. McCoy, state highway engineer of California, succeeding A. E. Johnson, chief engineer of the Arkansas State Highway Department.

First vice president, Frank D. Merrill, commissioner, Department of Public Works and Highways of New Hampshire, succeeding Mr. McCoy.

Treasurer, E. W. Kilpatrick, State Highway Department of New Jersey,



A.A.S.H.O. leaders at Seattle convention: Left to right, John A. Volpe, commissioner of the Department of Public Works of Massachusetts and president of the John A. Volpe Construction Company, Inc., Malden, Mass., A.G.C., newly elected vice president for the First Region of the American Association of State Highway Officials; George T. McCoy, state highway engineer of California, newly elected president of A.A.S.H.O., and A. E. Johnson, chief engineer of the Arkansas State Highway Department, retiring president of A.A.S.H.O.



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succeeding George H. Henderson, principal highway engineer of Rhode Island.

Regional vice presidents:

First Region, John A. Volpe, commissioner of the Department of Public Works of Massachusetts.

Second Region, Claude R. McMillan, chief highway commissioner of South Carolina.

Third Region, Ralph R. Bartelsmeyer, chief highway engineer of Illinois.

Fourth Region, W. A. Bugge, director of highways of Washington State.

New members elected to the executive committee of the association were:

George S. Covert, director of highways of Louisiana; R. H. Baldock, state highway engineer of Oregon; Rex M. Whitton, chief engineer of the Missouri State Highway Department.

Johnson Succeeds Hale

Hal H. Hale, Washington, D. C., executive secretary of A.A.S.H.O. for the last 11 years, announced his resignation effective Jan. 1, and his acceptance of a new position as highway consultant and assistant to the vice president of the Association of American Railroads, with offices in Washington.

Mr. Hale will be succeeded as executive secretary by Mr. Johnson, outgoing president of A.A.S.H.O.

A resolution adopted at the meeting praised Francis V. du Pont for his "wise and able leadership" as commissioner of the Bureau of Public Roads and noted with "extreme satisfaction" his assignment to "a position of even greater responsibility in conjunction with the implementation of what will undoubtedly be the world's greatest highway program." (Page 41.)

The resolution urged that Mr. du Pont be continued in charge of any major highway program which may be executed because of his talent as "our foremost highway administrator."

Another resolution praised Mr. Hale for doing "an outstanding job" as executive secretary and accepted his resignation "with regret but with the certain knowledge that wherever he goes he takes with him the deep and lasting friendship of every member of this association."

A resolution was adopted also accepting with regret Mr. Henderson's resignation as treasurer and expressing "sincere gratitude for his excellent, faithful and cheerful services" through 16 years in that office.

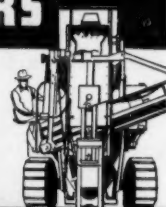
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Force Account Work Under Secondary Plan Clarified

The position of the Bureau of Public Roads with respect to force account work involved in projects coming under the 1954 secondary road plan was explained by Commissioner Francis V. du Pont in addressing the annual meeting of the American Association of State Highway Officials Nov. 9.

The secondary road plan permits states to avail themselves of greater latitude in the expenditure of federal-aid secondary funds. Concern has arisen in states which perform a substantial amount of construction by force account as to whether this practice could be continued, Mr. du Pont said. In other states where a majority of the construction work has been done by contract, contractors have felt that they would be severely penalized because force account work was permitted. Thus, Mr. du Pont pointed out, diametrically opposite conclusions have developed, depending upon the practice currently prevalent in a given state.

'No Reason for Concern'

Mr. du Pont gave the bureau's views as follows:

"The changes in the law are really academic if the state continues the secondary road work as in the past and does not come under the secondary road plan. The new Section 17 is quite similar to our procedures and regulations, prior to the passage of this section. Under them if the state wished to do force account work, it was required to justify such work as being in the public interest, or to show that it was work not of a kind adaptable to normal contract procedures. Under the new section the certifying officer for the state must give reasons sufficient to permit an affirmative finding to be made that the force account work is in the public interest. If a state comes under the secondary road plan, we are of the opinion that Section 17 is not applicable to that state. However, the plan, in our opinion, contains adequate provisions in the event of a substantial increase in force account work in that state.

"Frankly, I can see no reason for concern on the part of any state or any segment of industry. . . . Experience and a little time will solve this problem."

The bureau explained its position

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in more detail in a statement dated Oct. 26, prepared as a special memorandum to members of Congress as a result of letters from them prompted by their constituents.

A.A.S.H.O. - A.G.C. Group Studies Highway Matters

The Joint Cooperative Committee of the American Association of State Highway Officials and The Associated General Contractors of America met at Seattle, Wash., Nov. 10 in conjunction with the annual meeting of the A.A.S.H.O.

Cooperative committees between A.A.S.H.O. and A.G.C. on the state level are proving very effective, it was reported, and the group recommended that such units be organized in states which do not have them.

Relieving Engineer Shortage

Much attention was devoted to the problem of overcoming the shortage of engineers in the highway field. The committee concluded that engineers should be relieved of all nontechnical work; that scholarships for worthy engineering students must be increased; that possibilities of using more modern methods on some types of work to save engineering manpower should be studied by highway officials and engineers; and that the A.G.C. must continue its efforts to improve salaries of highway officials and engineers.

In many states, it was pointed out, good roads associations have done effective work in advancing highway programs, and the possibility of organizing such groups in states which do not have them should be explored.

Big Highway Program Needed

The committee reaffirmed its opinion that a highway program of the size proposed by President Eisenhower is needed, that it would be a good investment, and that the contracting industry has the capacity to carry it out promptly and efficiently.

There was a good representation of A.G.C. members, headed by M. Clare Miller, San Ore Construction Co., McPherson, Kans., chairman of the A.G.C. Highway Contractors' Division, who assisted W. A. Warrick, of the Pennsylvania Department of Highways, A.A.S.H.O. co-chairman of the Joint Cooperative Committee, in conducting the meeting.

Group to Advise GSA on Better Public Buildings

The General Services Administration announced last month the appointment of an advisory group representing architecture, engineering, contracting, and building management to seek improvements in the construction, operation and maintenance of public buildings.

Eight advisors will make a study of present government standards for public buildings and recommend construction improvements to promote greater economy and efficiency. The findings are expected in four months.

"Essentially we are taking a long, hard look at our standards," explained Peter A. Strobel, commissioner of public buildings. "We are getting set, by searching for whatever improvements prove necessary, to meet the pressing needs of the future with economical and efficient construction practices.

"In view of the 15-year ebb in constructing federal buildings, the government obviously has both worn out and grown out of its clothes. The everyday business of government has created a huge backlog of building needs awaiting the time when large-scale costs will not unduly burden the federal budget.

"Meanwhile, we are planning limited construction under the new lease-purchase authority to satisfy most urgent requirements. With the competent advice of private industry, we will be able to keep down the cost of our lease-purchase program. Moreover, it will give us the chance to test our improved standards for the larger needs of the future."

The advisory group consists of:

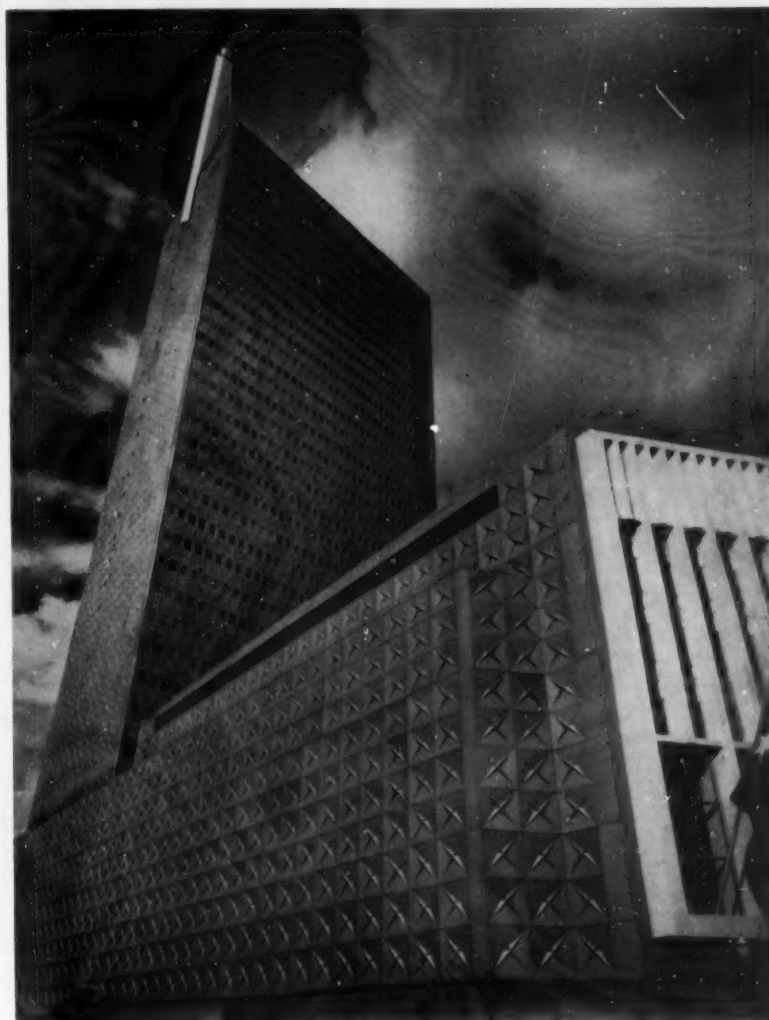
Architects—Earl H. Lundin, Carson & Lundin, New York City, and George M. Ewing, Philadelphia.

Engineers—Albert L. Baum, Jaros, Baum & Bolles; Tage Pearson, and Archie M. Erickson, Wilcox & Erickson, all of New York City.

Contractors—N. J. Pescatore, John W. Ryan Construction Co., New York City, and John J. McDermott, Irons & Reynolds, A.G.C., Washington, D. C.

Building management—Earle Schultz, Chicago, former president of the National Association of Building Owners and Managers.

W. E. Reynolds, former commissioner of public buildings, will serve as consultant.



The 40-story, \$25 million Republic National Bank Building, "the pride of Texas, dream of architects, and tomorrow's model for the banking world," opened this month in Dallas. During its construction span dating from early 1951, a new record probably was set in publicity issued concerning its features, which include a rotating beacon light on a 150-foot tower atop the structure. Expanded shale aggregate was used in concrete work, in panels of the wall system, and in precast concrete roof decks and floor slabs. It is covered with aluminum skin. From April 1951 through June 1952, the public relations-minded bank maintained a plush observation gallery for visitors, complete with cold drink machines and telephones, which registered more than 112,000 observers. Architects were Harrison & Abramovitz, New York, and Gill & Harrell & Associates, Dallas. General contractor was J. W. Bateson Co., Inc., Dallas.

Special awards were presented by the American Standards Association at its Nov. 21-22 meeting in New York City to three men "who have done most to encourage the use of modular measure." They are: Harold D. Hauf, head of the Department of

Architecture, Rensselaer Polytechnic Institute, Troy, N. Y.; C. E. Silling, architect of Charleston, W. Va.; and C. W. Kraft, president, Kraftile Co., Niles, Calif. The awards were recommended by three industry associations.

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BUILDING

Minnesota's A.I.A.-A.G.C. Group Gets Results

- Letting Date Clearing House, Specs Check List Are Projects

» A NOTABLE example of mutually beneficial cooperation between architects and general contractors at the local level is the Joint Cooperative Committee of the Minnesota Society of Architects and the Associated General Contractors of Minnesota.

Established in 1948 and patterned after the national A.I.A.-A.G.C. joint committee, the hard-working Minnesota group has undertaken many projects serving the best interests of the industry, some of which have attracted national attention in the field of architect-contractor relations.

Among its major projects have been the development of a "Standard Check List for Specification Titles" designed to aid in eliminating bid estimating errors on the part of the contractor, and establishment of a statewide clearing house for letting dates.

The check list project, which took countless hours of study, writing, editing and discussion, drew praise from the national A.I.A.-A.G.C. committee (November *CONSTRUCTOR*, page 43), which recommended that other local joint committees study the list for possible adaptation in their areas.

To establish the letting date program, architects were notified that the A.G.C. office would be a clearing house and were encouraged to call in and clear a prospective date on the calendar. Regular bulletins listing dates were issued until more than 80 per cent of all major job-letting dates for the state were cleared through the

A.G.C. office, thus eliminating many conflicts.

The committee has developed a number of helpful forms and standards and is working on others, such as a change order request form, a termination clause, and a form of requisition for partial payments in lump sum contracts. It also has made important recommendations for proper insurance coverage after a year of study by a subcommittee and insurance firms.

To provide an easy reference guide for all recommendations of the group, a codification was developed and published in instalments and issued at regular intervals.

The 14-man committee, with the A.G.C. of Minnesota's manager acting as secretary, assigns matters requiring considerable study to four-man subcommittees.

Currently, a study program is under way on the subject of the single contract system as opposed to the award of separate contracts, and the co-chairmen, George Darrell for A.I.A., and Dean Lundholm for A.G.C., are optimistic about the committee's ability to develop a well-accepted recommendation.

The move to establish the committee came in 1948 at a time when building contractors needed simultaneous decisions with the architects to deal with jurisdictional problems which arose from architectural specifications for sheet metal and other work.



At recent meeting of Minnesota architects-contractors committee are, seated: Roy Thorshov, A.I.A.; Dean Lundholm, A.G.C. co-chairman; George Darrell, A.I.A. co-chairman; John Ganley, A.G.C.; W. H. Tusler, and K. A. W. Backstrom, A.I.A. Standing: L. C. Halverson, A.G.C.; Mark Hayes, A.I.A.; W. A. Bastedo, A.G.C. staff; Gordon Comb, A.I.A.; J. P. Swenson, A.G.C.; W. A. Backstrom and Harold Crawford, A.I.A.; and C. H. Bingham, A.G.C. Members not shown are H. D. Lovering and T. J. Fowler, A.G.C.

Iowa Joint Committee Starts Technical Service

A technical advisory service for the construction industry in Iowa has been inaugurated through efforts of the Joint Cooperative Committee of the Iowa Chapter, American Institute of Architects, the Iowa Engineering Society, and the Master Builders of Iowa, chapter of The Associated General Contractors of America.

In 1952 the joint committee organized the Iowa Building Advisory Committee to study and submit recommendations regarding masonry wall and concrete floor construction practices, problems, specifications, etc.

This advisory committee recently inaugurated a series of technical service bulletins which will be issued periodically to members of all three organizations in form suitable for use by contractor superintendents, foremen, and field representatives of architectural and engineering firms.

Sources of information for the bulletins consist of the varied experiences of the committee members and data obtained from various research organizations. The first bulletin dealt with job and subgrade preparation for concrete floors.

The Advisory Committee is composed of members of the three sponsoring associations, aided by representatives of the Portland Cement Association, the Structural Clay Products Institute, and engineers of allied interests. Members are as follows:

J. E. Borg, Brooks-Borg (I.E.S.), Des Moines; C. T. Bridgman, Goodwin Affiliate Companies, Des Moines; K. P. Ferrell, Dewey Portland Cement Co., Davenport; Carroll Johnson, Ringland-Johnson, Inc. (M.B.I.), Des Moines; R. G. King, Master Builders Co., Des Moines; C. P. Lewellen, Howard R. Green Co. (I.E.S.), Cedar Rapids; Clyde Lighter, Tinsley, Higgins, Lighter & Lyon (A.I.A.), Des Moines; Fred Loy, Portland Cement Association, Des Moines; F. W. Mast, Jens Olesen & Sons Construction Co. (M.B.I.), Waterloo; Maurice Miller, Hawkeye-Marquette Cement Co., Des Moines; James Neville, Structural Clay Products Institute, Ames; W. R. Sheldon, Stanley Engineering Co. (I.E.S.), Muscatine; and C. C. Woodburn, Woodburn & O'Neil (A.I.A.), Des Moines.

One more architect and another contractor are to be added to the committee. Its secretary is W. W. Moeller, M.B.I. executive secretary.

THE CONSTRUCTOR, DECEMBER 1954

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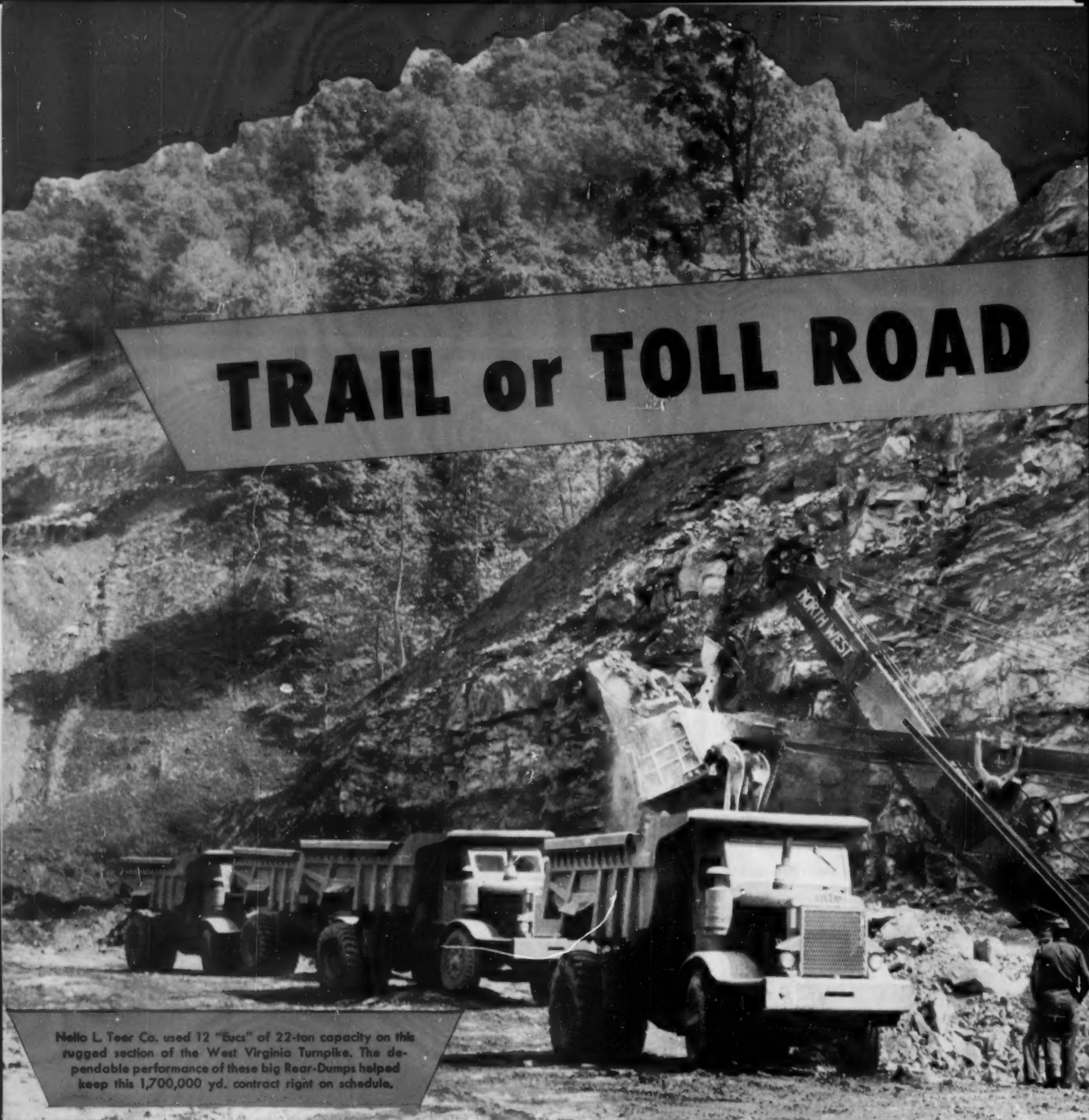
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heaped loads of 9 to 21 cu. yds. (7 to 18 yds. struck). And for fast mobile loading of large capacity hauling equipment on big yardage jobs, the Euclid Loader is unequalled for low cost production.

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On the Ohio Turnpike "Eucls" outnumbered competitive rubber-tired equipment by better than 4 to 1 and were on practically every section of this 241 mile job. In this photo, a Bottom-Dump with a heaped load of 18 yds. pulls away from a "Eucl" Loader for a long haul to the fill. Two Loaders and 16 Bottom-Dumps made the dirt fly for D. W. Winkelman Co. on this eastern section.



In California, Frederickson & Kessler used 4 "Eucls" to move clay overburden and wet sand fill material for an overpass project on U. S. Highway 99. Unusually high job availability and long blade life were important factors in maintaining low yardage cost and high production for this contractor.

Jamaica's Public Works Department uses a fleet of seven 10-ton "Eucls" for construction and maintenance. In the illustration, tractor loaders teamed up with Model UD Euclids in close quarters at a side hill cut during construction of a road along the coast.



PERFORMANCE AND HIGH JOB AVAILABILITY HAVE MADE "EUCLS" THE PREFERRED EQUIPMENT OF EARTH MOVING CONTRACTORS

For small road grading jobs and other projects where speed and exceptional maneuverability are important, the Euclid S-7 Scraper is the answer. It is powered by a 138 h.p. engine, has a struck capacity of 7 cu. yds. and makes a non-stop turn in 26 feet.

On the New York Thruway contractors used all types of Euclid equipment for the wide range of job conditions. On a 2½ million yd. contract near Kingston, John Arborio, well known Poughkeepsie road builder, used 7 Twin-Power Scrapers on a particularly tough section of the job. The Twins' tremendous power and traction kept the job going when other equipment was stymied . . . they moved loads of 17 bank yds. on grades up to 20% and had power to spare.

Easy loading and fast travel speed of "Eucl" Scrapers paid off for Cook Construction Co. on this section of the Ohio Turnpike. Top extensions on the six "Eucls" increased the struck capacity to 18.5 cu. yds. Complete cycle time—load, haul, dump and return—was only 3.6 minutes for the 2000 ft. round trip with heaped loads of about 20 yds.



A. P. W. A. and A. G. C. Issue Contract Forms

• Standard Document for Municipal Engineering Construction

» THE American Public Works Association and The Associated General Contractors of America have announced the publication of a complete set of uniform construction forms intended for use on municipal engineering construction projects.

These forms were developed by experienced municipal administrators and contractors in this public works field whose combined efforts have produced a practical working set of documents. They have been officially approved for use by both associations. Title is: Uniform Public Works Engineering Construction Forms.

The complete set of documents includes (1) An Invitation for Bids, (2) Instructions to Bidders, (3) Bidders' Proposal, (4) Contract or Agreement, and (5) General Conditions of Contract.

The language and arrangement of the forms were designed to provide an easily understood document, avoiding highly technical and legal terminology. The documents may be used as printed, or adapted as needed.

Publication of the forms marks completion of the most important task undertaken by the Joint Cooperative Committee of the two associations since it was established in October 1952.

Members of the committee repre-

senting A.P.W.A. are: George Thompson, city engineer, Detroit, co-chairman; Warren A. Coolidge, director of public works, Nashville; John Flockhart, chief engineer, Department of Public Works, Newark; Roy McLeese, city engineer, Salt Lake City; Lyall Pardee, deputy engineer, Department of Public Works, Los Angeles; J. G. Rollins, director of public works, Dallas; and Milton Rosen, former commissioner of finance, St. Paul; and D. F. Herrick, executive director, A.P.W.A., Chicago, co-secretary.

Members of the committee representing A.G.C. are: C. Russell Ralph, Kaw Paving Co., Topeka, Kans., co-chairman; Albert D. Blakeslee, C. W. Blakeslee & Son, New Haven; Henry Boh, Boh Bros. Construction Co., New Orleans; V. B. Higgins, V. B. Higgins Co., Greensboro, N. C.; F. S. Oldt, F. S. Oldt Co., Dallas; H. P. Phelps, St. Paul Dredging Co., St. Paul; J. A. Thompson, J. A. Thompson & Son, Inglewood, Calif.; and James M. Sprouse, A.G.C. national staff, Washington, co-secretary.

Copies of the document are available from the A.G.C., 1227 Munsey Building, Washington 4, D. C., at 25¢ each, \$2.75 per dozen, and \$20 per 100. It is designated A.P.W.A. Standard Form A, and A.G.C. Standard Form 10.



A special wire rope is used on huge Bucyrus 450 Special Monighan crane on Chief Joseph Dam project by Columbia River Constructors. Bethlehem Steel Co. made 800 ft. of 1 3/4 in. diameter non-rotating rope for use in 8 to 12 ft. lengths, which is seeing heavy service in handling concrete bucket, other loads.

Indiana Plans for Seaway

Indications of what probably will become a major movement of Great Lakes states toward development and modernization of ports to share in benefits of the projected St. Lawrence Seaway came last month with a proposal for development of a \$35 million Indiana port on Lake Michigan.

The proposal came from the Indiana Legislative Advisory Commission, and Governor Craig subsequently gave assurances that he would strongly support any measures that might be passed by the 1955 legislature to clear the way for the project, which would be financed principally by bonds.

The Indiana Board of Public Harbors and Terminals brought forth the issue, noting that the Corps of Engineers in 1949 reported favorably on the proposed site, known as the Burns Ditch area, a 1,500-acre tract about nine miles east of Gary. The board hopes to have the project completed by 1959 when the seaway is to open.

About \$25 million for the site and construction of docks and warehouses would be financed with revenue bonds and \$10 million for breakwater construction is anticipated from the federal government.

Lock Designs Started

Meanwhile, Administrator Lewis G. Castle of the St. Lawrence Seaway Development Corp. directed the Corps of Engineers to design one proposed lock in the Point Rockway Canal opposite Iroquois, Ontario, and the proposed Grass River and Robinson Bay locks in the Long Sault Canal near Massena, N. Y., to be 800 ft. long, 80 ft. wide, and 30 ft. over the sills, in conformity with Public Law 358 and with dimensions of Welland Canal locks and proposed Canadian locks.

"Careful consideration has been given to the various recommendations made that locks be constructed with larger dimensions," Mr. Castle noted. "However, the corporation is limited to the authorized expenditure of \$105 million, and increasing the size of the locks places a doubt upon the possibility of our operating within our financial limitations."

The corporation estimated that about 75 per cent of all prospective tonnage on the seaway will be by lake carrier, leaving 25 per cent by seagoing ships, most of which will be able to ply the seaway when completed.

Missouri Basin Reappraisal

A committee of seven federal agency representatives has begun a "review and reappraisal" of the water resources and related land resources programs in the Missouri Basin, it was announced last month.

Called the Missouri Program Review Staff, the committee is conducting the field study for the Federal Inter-Agency Committee on Water Resources at the request of the Budget Bureau, and must make its initial report to the inter-agency group by April 15. Final report is due sometime next fall.

The appraisal group consists of:

Brig. Gen. W. E. Potter, Omaha, representing the Department of the Army, who is acting as chairman of the review functions; Harrell F. Mosbaugh, Billings, Mont., Interior Department; Harold E. Engstrom, Lincoln, Neb., Agriculture Department; Glen J. Hopkins, Kansas City, Department of Health, Education and Welfare; Kenneth G. Tower, Federal Power Commission; Verne Alexander, Kansas City, Commerce Department; and Arnie Solem, Kansas City, Labor Department.

The review group announced that it will establish auxiliary work groups from within the agencies represented, as necessary. The work will be coordinated with other federal agencies, the basin states, and local governmental and private groups in the area.

Folsom Dam Example of Agency Cooperation

» THE best example of close collaboration between the Corps of Engineers and the Bureau of Reclamation to date is the \$65 million Folsom Dam and power project near Sacramento, Calif., where the two agencies are working at a common site, with the Corps handling construction of the dam and the Bureau being responsible for the power plant phase.

Excellent cooperation has been indicated, and the project, involving dovetailing of the two phases toward the completion goal in the spring, is reported progressing satisfactorily.

There have been a number of unusual features in the project, including the encountering of weathered fault zones which required time-consuming appraisal and design, and a diversion problem complicated by a small drainage area, large snow run-offs over long periods of time, a limited working area at the site, and a heavy mining debris deposit in the river.

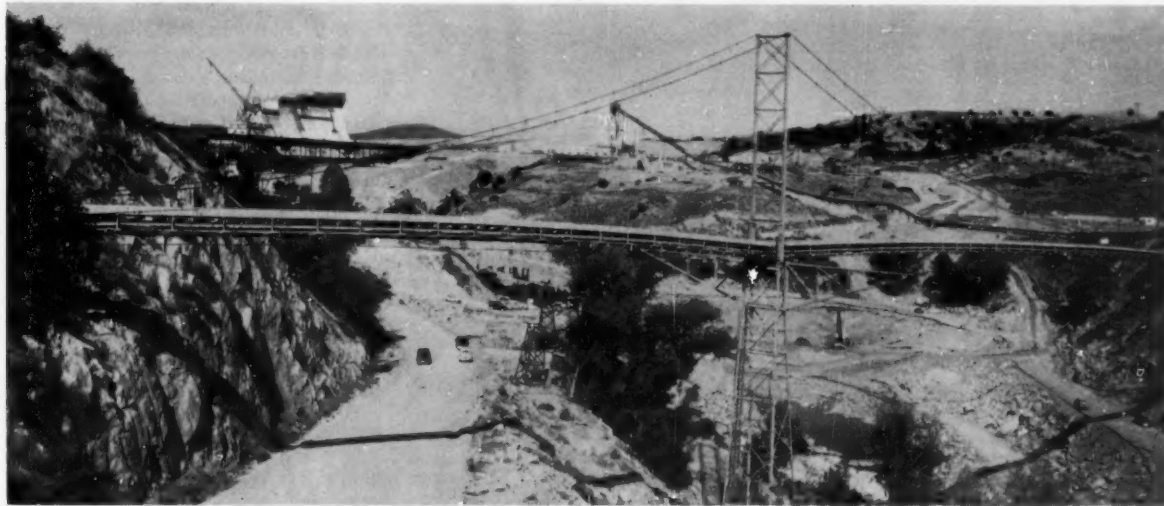
Although overtopping of the cofferdams was anticipated during the run-off seasons, considerable damage was done in January 1953, including the loss of the contractor's trestle.

For the dam construction, aggregate from the dredge tailings and gravel in the American River four miles downstream is trucked to the dam site and transported to the mixing plant by conveyor belt which includes a suspension about 1,000 feet long.

The Corps required concrete to be placed at 50 degrees F or less, which made it necessary to erect a large refrigeration plant with a capacity of some 1,000 tons of ice per day, and to chill the aggregate in storage bins during the summer heat. Thousands of tons of flake ice were used in the mix. In addition, cement content was kept low for economy and to limit heat, and the Calaveras Cement Co. took special steps to hold down the temperature of the cement.

The structure required the placement of about 8.6 million cu. yds. of earth fill, and the pouring of about 1.2 million cu. yds. of concrete. The concrete river section will be 340 ft. high and 1,100 ft. long, and five miles of compacted earth wings and dikes will aid in backing up water for a reservoir storing 1 million acre feet, nearly triple the capacity originally authorized in 1944. The installed power capacity will be 162,000 kw.

The main dam and its earth wings are being constructed by the joint venture of Merritt-Chapman & Scott Corp., New York City, and the Savin Construction Co., East Hartford, Conn. River work and foundation excavation for an afterbay below the dam were performed for the Bureau of Reclamation by the Guy F. Atkinson Co., South San Francisco, Calif., and the contract for completion of the power house is held by Stolte, Inc., of Oakland, Calif.



Belt conveyor system bridges American River and climbs 139 feet to the top of the batching plant at Folsom Dam project. Trucks haul aggregate over high speed road from sizing plant to conveyor. Trestle and left abutment blocks are visible in background.

Corps, A.G.C. Hold Western Meeting on Specs

• Discussions with Division Engineers Prove Beneficial

» The second of a proposed series of meetings leading to a better understanding of mutual problems by general contractors and division offices of the Corps of Engineers was held last month in Portland, Ore.

Col. Louis H. Foote, Division Engineer, North Pacific Division, and members of his staff met with representatives of The Associated General Contractors of America to discuss an 18-point agenda.

Col. W. F. Powers, Chief, Operations Division, Civil Works, Office of the Chief of Engineers, outlined the purpose of the meeting. He stated that since 1948 the A.G.C. Task Unit for Corps of Engineer Specifications has worked closely with

the Corps in an effort to eliminate inequitable provisions in the specifications, to the mutual advantage of both the government and its contractors.

As a result of these meetings, a number of recommendations have been approved and transmitted to Division and District engineer offices through letters or revised orders, regulations and guide specifications.

Col. Powers reported that such meetings of Division Engineers and members of their staffs, A.G.C. members, and representatives of the Office of the Chief helped to bring about a mutual understanding of why certain recommendations had been accepted and others had not, and the

reasons for making changes. The first such meeting was held in June with the Southwestern Division in Dallas.

J. A. Henderson, United Construction Co., Winona, Minn., chairman of the A.G.C. task unit, outlined the unit's basic policy of making only recommendations which were of benefit to all contractors, of presenting no individual complaints, and of not attempting to influence design. Then he led the discussion on the items on which the Corps and the A.G.C. had reached agreement during the past six years.

Among subjects listed were: site investigation and representation; physical data; cleaning up; protection of material and work; equipment furnished by the government; right-of-way; payment for preparatory work; plant; subdivision of principal items of work; lump-sum bid items for building work; diversion and care of water and cofferdam construction; over-runs and under-runs in actual quantities of work completed; payment for material delivered but not incorporated in the work; excavation provision "lines, grades, and tolerances"; and earthquakes.

Also discussed at the request of A.G.C. members operating in the Pacific Northwest were: operations in conformity with requirements of nearby railroad; uniformity of inspection; non-reciprocal inspection; and builders' risk insurance.

The meeting was attended by 16 representatives of the Corps of Engineers, including men from the Alaska, Seattle and Portland district offices. Thirteen A.G.C. representatives attended including George C. Looz, of Stolte, Inc., Oakland, Calif., chairman, A.G.C. Contract Forms and Specifications Committee; Geo. H. Atkinson, Guy F. Atkinson Co., South San Francisco, former committee chairman, and A. S. Macdonald, Strong & Macdonald, Tacoma, Wash., chairman of the A.G.C. Heavy Construction and Railroad Contractors Division. J. M. Sprouse, division manager and committee secretary, represented the A.G.C. national office.

Municipal sewage treatment works construction is just approaching a rate (\$200 million annually) required to barely keep pace with currently developing needs, the Public Health Service reports. Untouched is a backlog of needs which had reached nearly \$3 billion in 1950.



Dedication of Georgia's new Eugene Talmadge Memorial Bridge across the Savannah River opened a 6-mile shortcut on north-south route between Georgia and South Carolina. The 6,034-foot cantilever crossing, shown from Savannah side, provides 135-foot vertical clearance over 400-foot channel. This is key feature of \$14,600,000 10-mile project including about 9 miles of low-level trestle bridge, causeways and approach roads. Constructed for Coastal Highway District of Georgia by Merritt-Chapman & Scott Corp.; Parsons, Brinckerhoff, Hall and Macdonald, consulting engineers; American Bridge Division, U. S. Steel Corp., superstructure.



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STATIONARY AGGREGATE PLANTS

Engineered to the Job

FOR TOP CAPACITY

Engineering News Record Photo

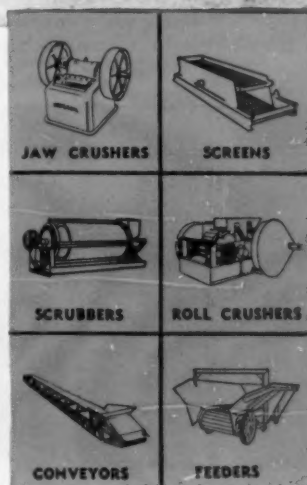
"Complete package" stationary crushing, screening, washing and loading plant designed and built by Universal for Niagara-Mohawk Power Corporation, Potsdam, New York.

Let Universal solve your aggregate problems with a Top Capacity "Engineered to the Job" plant for maximum profits. Take advantage of Universal's 50 years experience in the designing and building of all types of crushing, screening, washing and loading installations.

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Whatever your specification or production requirements, whether you need 50 or 1000 tons per hour . . . Universal builds the plant you want for the best operation. Tell us your job specifications.



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Better Equipment, Higher Construction Level Called Conditions for Continued High Output

• Reported Extensions of Easy, Excessive Credit Deplored

» CONTRACTORS' views on problems affecting the interests of both general contractors and equipment dealers were discussed by Arthur S. Horner, A. S. Horner Construction Co., Denver, at an Associated Equipment Distributors' regional meeting.

The Past President of The Associated General Contractors of America spoke at Colorado Springs. Excerpts from his speech are as follows:

Repair parts. "One of the bugaboos of the contractor is breakdowns, especially on highly mechanized jobs where one piece of equipment in a key spot in the production line can tie up a whole job until repairs are made. At a time like this a good stock of parts on the dealer's shelves is a big factor in minimizing the cost of breakdowns."

Joint committee. "I wish to pay tribute to members of the Joint Cooperative Committee of A.E.D. and A.G.C. who meet periodically to consider our mutual problems. One of their accomplishments was the *Checklist for Ordering Replacement Parts*. It is the work of such committees that brings about better understanding of the problems with which we are faced."

Day labor. "As fellow members of a highly competitive segment of the free enterprise system we expect your cooperation in discouraging the day labor practices of municipalities, counties, states and the federal government where the work to be done can be advertised and awarded to the lowest responsible bidder."

Easy credit. "We deplore the practice of some distributors of extending easy credit in excessive amounts to contractors who have just entered the business, or would-be contractors who have not been established long enough to exemplify the qualities of skill, integrity and responsibility which should be the prime consideration in assessing the contractor's ability to pay. We have heard of instances where earth-moving equipment was released to contractors at nothing down and so much per cubic yard on material to be moved on some contract in the future."

"You may ask, 'Why should the construction industry be concerned about this if the equipment distributor is willing to take the risk involved in such a deal?' Our answer is that the distributor becomes a quasi-partner of the contractor to whom such terms are extended and to that extent is a competitor of those properly estab-

lished in the business. We do not believe that the contractor who is set up in business on that basis is fair competition, and surely you do not wish your best customers of long standing to be subjected to that sort of competition."

High level. "It seems to me that there are two conditions under which the equipment industry can be maintained on a high level of production. The first is by the improvement in present equipment and development of new machines that will make present models obsolete, and thus force the industry into purchase of new equipment before present models are worn out. That is a problem for the manufacturer and no doubt is under consideration on a continuing basis."

"The second is the expansion of our construction market which is a job for all of us. The need for highways, schools, water supply, sewage disposal systems and the development of our natural resources is almost unlimited, and not likely to be met in the foreseeable future even though we step up the rate of construction."

"This program should be sold, not on the basis of the construction industry's need for it or on the basis of creating employment which would be a by-product of the program, but rather on the idea that the construction industry is in a position to construct the facilities for which the whole country has a need and can put to beneficial use."



At A.E.D.-A.G.C. Joint Cooperative Committee meeting in Chicago last month were, clockwise around table: F. J. Butler, Butler Construction Co., Grand Forks, N. Dak.; E. D. Sweeney, Sweeney Bros. Tractor Co., Fargo, N. Dak.; C. Russell Ralph, Kaw Paving Co., Topeka, Kans.; E. M. Farnum, Allied Construction Equipment Co., St. Louis; Frank Skidmore, A.E.D., co-secretary; I. R. Kraemer, Buran Equipment Co., Oakland, Calif., co-chairman; C. E. Cooke, Cooke Contracting Co., Detroit, co-chairman; C. S. Embrey, A.G.C., co-secretary; P. A. Dufford, Intermountain Equipment Co., Boise, Idaho; M. Clare Miller, San Ore Construction Co., McPheerson, Kans.; H. J. Hush, Griffin Equipment Corp., New York; P. M. Thornton, Thornton Construction Co., Hancock, Mich.; and E. G. Hoepfner, Hoepfner-Bartlett Co., Eau Claire, Wis.

A.E.D.-A.G.C. Groups Increase

» MATTERS of mutual interest to general contractors and equipment distributors on a national scale were discussed by the Joint Cooperative Committee of The Associated General Contractors of America and the Associated Equipment Distributors on Nov. 12 at the Drake Hotel, Chicago.

A survey by both groups showed that 22 state or local joint cooperative committees had been established for the consideration of problems in the areas of the A.G.C. and A.E.D. chapters. The survey indicated that these committees were of value to the industry. Formation of additional committees was encouraged.

A recommendation was agreed to that the national office of each association send a letter to their respective chapters outlining the purposes and

objectives of local committees, the procedures of organization, and an outline of subjects of common interest which might be discussed.

Discussion emphasized the value of three A.E.D. documents, in which the A.G.C. collaborated, to dealers and contractors. These are: *Repair Parts Order Form Check List*, *Standard Inspection Report Forms*, and *Standardization of Repair Parts Books*.

Equipment Auctions Discussed

Private and government auctions of used equipment throughout the nation were discussed. It was found that a definite pattern has not been established as to success of the auctions as a means of disposing of or acquiring good used equipment. Prices for equipment in like condition have varied widely.

A.G.C. representatives reported on the assurance which the association had given to the President's Advisory Committee on a National Highway Program (the Clay committee) that the contracting industry had the capacity to complete the proposed expanded highway construction program efficiently, economically and promptly with the public receiving increasing value for its investment. Local groups were urged to support good roads organizations which help explain highway needs to the public.

Presiding for A.E.D. was I. R. Kraemer, Buran Equipment Co., Oakland, Calif.; for A.G.C., C. E. Cooke, Cooke Contracting Co., Detroit.



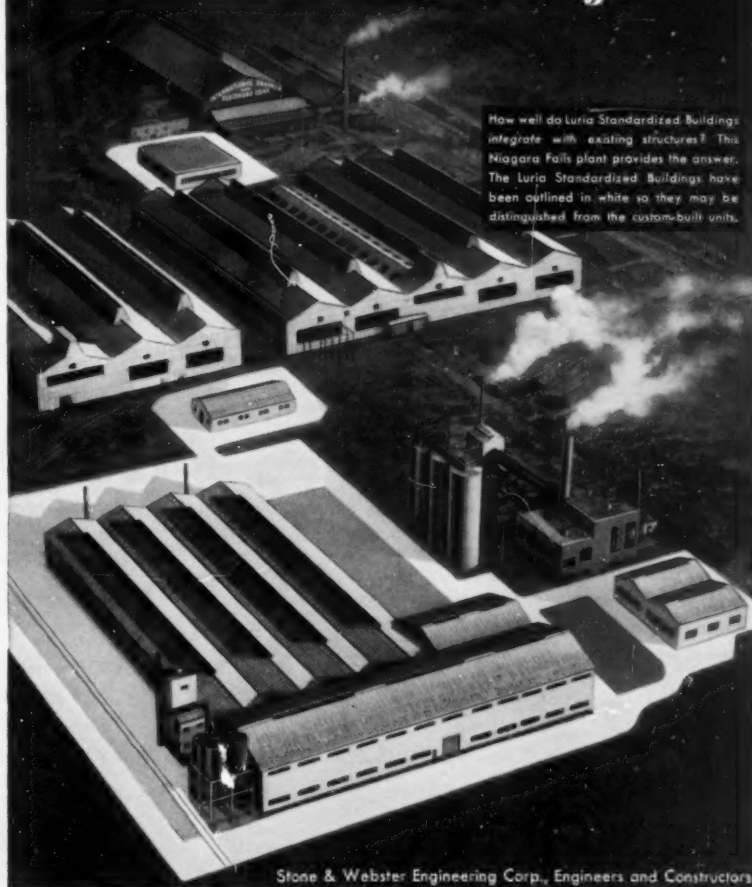
Still a year and a half away from full production, Caterpillar Tractor Co.'s new plant and office is rising rapidly on a 423-acre site at Decatur, Ill.

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SPEER CARBON COMPANY

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LURIA Standardized Buildings



How well do Luria Standardized Buildings integrate with existing structures? This Niagara Falls plant provides the answer. The Luria Standardized Buildings have been outlined in white so they may be distinguished from the custom-built units.

Stone & Webster Engineering Corp., Engineers and Constructors

The LURIA system of STANDARDIZATION lowers your building costs and adds high speed to your expansion program

All the advantages of custom-built units are included in Luria Standardized Buildings. Designed for *durability*, Luria structures surpass the most stringent building code regulations. And Luria's standardized components are engineered for

adaptability. They combine to successfully meet individual architectural needs. If these are the requirements of your expansion program, Luria can provide them for you... at less than the cost of custom-built units and in far less time.



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The Facts Behind Allis-Chalmers Leadership in Torque Converter Tractors

*Fourteen years of experience . . . eight years with production models
. . . thousands of torque converter tractors out in the field . . .
millions of operating hours on every kind of work in the construction business.*

TODAY'S top contractors have given their "stamp of approval" to torque converter drive—as a key factor in the new standards of tractor performance they need for today's closely-bid jobs. Here's why —

Automatic Matching of speed and pull to load and terrain conditions . . . more dirt moved every hour, day in and day out.

Hydraulically cushioned protection for engine, clutch, transmission, rear end. The entire tractor lasts longer! That means less downtime, lower maintenance costs, more profit.

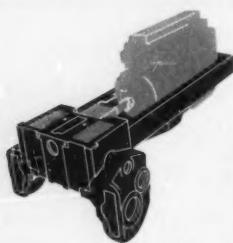
Operators love it! Allis-Chalmers torque converter tractors are so easy to handle (most shifting is eliminated) that operators do a top-notch job all day long.

Yes, the construction industry's most experienced men are demanding and buying torque converter tractors . . . and in this, Allis-Chalmers leads the way.

But, remember, you don't buy just one feature . . . you buy a tractor, with torque converter drive designed as a matched part of the entire machine. This advanced drive is only one of the many outstanding features that have switched so many leading contractors to Allis-Chalmers tractors. So . . .

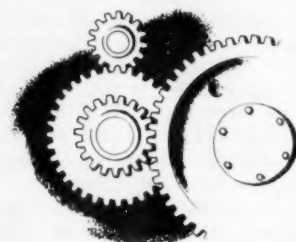
Check all these features before you buy!

All-Steel Box-A Main Frame with one-piece, rear-end housing gives improved weight distribution, soaks up shocks, provides better equipment mounting, greater servicing ease . . . longer equipment life.



Service Simplicity of Unit Construction — Power drive components can be easily removed, repaired or replaced without disturbing adjacent parts . . . saving time and money.

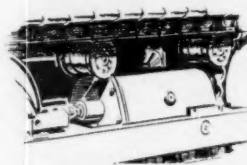
"Live" Sprocket Shafts — "Live" shafts with straddle-mounted bearings permit small, more serviceable seals. Double reduction final drives with smaller gears and shorter, heavier shafts mean extra ground clearance, better alignment, longer life.



1,000-Hour Lubrication — Tapered roller bearings and positive seals on truck wheels, idlers, support rollers and final drives extend lubrication intervals, cut downtime.

Hydraulic Booster Steering — Gives operator small tractor maneuverability with new ease. In addition, self-energizing brakes which take hold with a firm, uniform grip, provide exact control and sure safety with less pedal pressure.

True-Dimension Track provides maximum ground contact . . . plus the right design, the best steels for every job condition . . . heat-treated for long life with the industry's newest, most complete facilities.



Oil-Enclosed Track Release Mechanism — Operates in oil, seals out dirt and moisture, always in working condition to provide positive protection.

See your nearby Allis-Chalmers dealer now for the full story. Whether you're interested in a big tractor like the HD-20 or HD-15 . . . or the smaller HD-9 and HD-5, you can be sure of getting the most advanced tractor in the business, because Allis-Chalmers is the leadership line.

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TRACTOR DIVISION • MILWAUKEE 1, U. S. A.



1940 THE FIRST tractor in the world with torque converter drive.



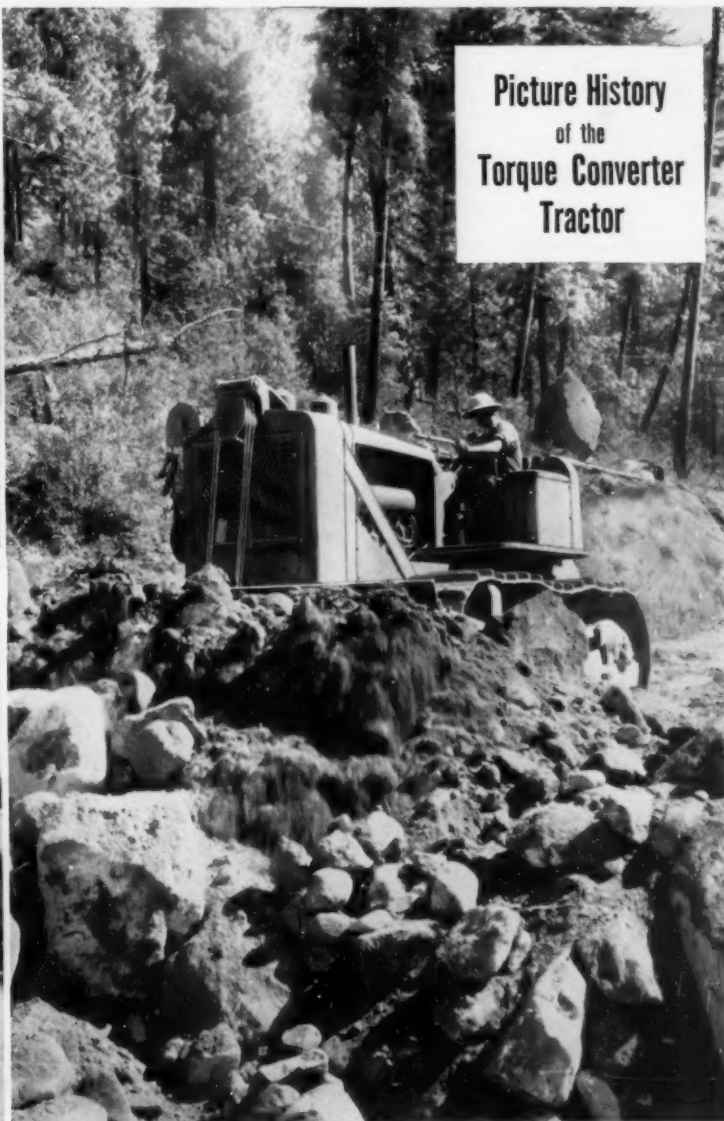
WORLD WAR II—The torque converter equipped M-4 military tractor, built by Allis-Chalmers.



1947 THE HD-19 proved the value of torque converter drive for big production.



1951 THE HD-20, 175 net engine hp, most productive tractor in the business.



1954 THE HD-15C, 135 net engine hp, brings advantages of torque converter to a new range of work.

Eastern Chapter Visited in Tour by MacLeod, Koss and Marshall

• A.G.C. Officers Contact Members of 12 Groups



Arriving in Orlando (Fla.), A.G.C. officials are met by Frank M. Hubbard (second from right), president of the Central Florida Chapter. Officers are: left to right, J. D. Marshall, A.G.C. executive director; George C. Koss, A.G.C. vice president; John MacLeod, A.G.C. president; Mr. Hubbard; and Frank J. Rooney, nominee for A.G.C. vice president in 1955.



Officers meet with James M. Albert (right), president, South Florida Chapter.



In Manchester, President MacLeod (right) is shown presenting pins to the following former past presidents of the A.G.C. of New Hampshire and Vermont: left to right, Gen. John Jacobson, Jr. (1953), Frank Whitcomb (1952), Robert Foster (1951), Parker H. Rice (1950), and Vin Swanburg (1949).

» A TEN-DAY swing through the East in mid-November by A.G.C. President John MacLeod, Vice President George C. Koss and Executive Director J. D. Marshall brought the officials in contact with representatives of a dozen chapters from Maine to Florida.

The tour which began in Miami on Nov. 9 and ended in Manchester, N. H. on Nov. 18 gave the national A.G.C. officers and local chapter officials a chance to review current conditions in the industry in light of a recent national survey conducted by the association. The survey indicated that construction volume would remain high, with competition becoming even keener.

Beginning in Miami as guests of the South Florida Chapter, the officials visited the Florida West Coast Chapter in Tampa, and then went to Orlando where Mr. MacLeod presented a charter to the recently organized Central Florida Chapter (story on following page).

From there the group continued to Atlanta for a meeting with the Georgia Branch, and then to White Sulphur Springs, W. Va., to take part in the annual convention of the Carolinas Branch. During this meeting the A.G.C. officers conferred with representatives of the A.G.C. of West Virginia and the Virginia Branch who were also present.

The New England portion of the tour followed with a trip to New Haven as guests of the Connecticut State Chapter; to Worcester, Mass., and conferences with A.G.C. of Massachusetts officials; and finally to Manchester where the A.G.C. of New Hampshire and Vermont and the A.G.C. of Maine were hosts.

In addition to discussing local industry problems at all of these points on the tour, the three officials spoke on national problems affecting construction and the part the A.G.C. is playing to solve them.

Mr. MacLeod declared that the industry will put into place over \$50 billion in total construction this year with over \$36 billion of this representing new construction. The total figure, he pointed out, will mean that about one out of every seven dollars spent for goods and services in this country in 1954 will be invested in construction.

Now, as in the future, he continued, construction activity will have to expand to keep pace with an increasing

population. Mr. MacLeod predicted further that competition within the industry will increase even more when general contractors grow in size to carry out increasing work.

He noted that this competition works to the benefit of the public where public works are concerned. "In bidding on public works projects these days many contractors submit marginal bids playing their luck that they'll be able to come out with a profit. As a result, nearly all public works bids are comparatively lower now," he said.

Mr. Koss told the local officials that the volume of future highway construction will be much larger than ever before. He declared that the highway contracting industry is ready to carry out promptly and economically President Eisenhower's proposed \$50 billion increase in highway construction in the next 10 years. Mr. Koss gave this and other testimony for the A.G.C. when he appeared before the Clay Committee which is studying ways of carrying out the President's proposal.

Mr. Marshall outlined to the chapters how the national association acts as spokesman for the construction industry before government agencies, and how it seeks through joint co-operative committees to solve mutual problems with other segments of the industry.



At banquet given by A.G.C. of Massachusetts at Frosian Club in Worcester following officers are shown: left to right, President MacLeod; Julius Abrams, president of chapter; Vice President Koss; Arthur Monahan, chapter secretary; Charles Soloman, national director; and Michael Dyer, president of the Worcester General Building Contractors Association.



In Atlanta, President MacLeod (second from left) confers with J. J. Black president of Georgia Branch, as Joel Clayton (second from right) talks with Ira H. Hardin. Both of the latter are active in chapter affairs.

Central Florida Chapter Receives Charter



Mr. MacLeod (left) presents charter to Chapter President Frank M. Hubbard.

» THE CENTRAL Florida Chapter of the A.G.C., which has been established and functioning for several months, received its official charter from A.G.C. President John MacLeod, Nov. 11, at ceremonies in Orlando's Eola Plaza.

Mr. MacLeod, touring eastern chapters, made the presentation and welcomed the group as the newest A.G.C. chapter at a dinner attended by central Florida civic leaders and A.G.C. representatives, including Vice President George C. Koss, Frank J. Rooney, nominee for vice president in 1955; Executive Director J. D. Marshall; J. L. Ewell, Lakeland, national director; and Judson Edwards, Tampa, secretary of the Florida West Coast Chapter.

President of the new chapter is Frank M. Hubbard, Hubbard Construction Co., Orlando.

Western Chapters View Regional Problems

• National A.G.C. Officers At Santa Fe Sessions Oct. 25-26



» THIRTY-FIVE officials from eleven A.G.C. chapters of the Western states and the national association met in Santa Fe, Oct. 25-26, for the fall session of the Western Chapters Conference, with the Associated Contractors of New Mexico acting as host.

Chairman B. B. Armstrong, Armstrong and Armstrong, Roswell, N. Mex., opened the conference and introduced the Honorable Paul Huss, Mayor of Santa Fe, who urged the officials to continue working for all needed improvements for which funds can be obtained.

Among the resolutions passed was one favoring a uniform system of signs, signals and flagmen's identification on highway construction. Another resolution urged member firms to "do everything in their power to promote safe working conditions" in the in-

terest of lessening job accidents.

A.G.C. President John MacLeod, Los Angeles, in continuing this theme, told the conference of the effectiveness of his firm's safety program. In addition to reducing human suffering, safe practices on the job have always resulted in lower operating costs. Mr. MacLeod said that his firm, the Macco Corp., has always saved on insurance premiums each year because of a low accident rate since initiating its accident prevention campaign.

George C. Koss, Des Moines, A.G.C. vice president, addressed the conference on his recent testimony before the Clay Committee studying ways of carrying out President Eisenhower's \$50 billion program to increase the construction of highways during the next 10 years.

J. D. Marshall, executive director of the national A.G.C., discussed pending and prospective legislation, affecting the construction industry, to be considered by the 84th Congress in the next two years. A question and answer period followed his remarks.

Earl Holt, center, of the Guy F. Atkinson Co., vice president of the Western Chapters Conference, relaxes during meeting with A.G.C. Vice President George C. Koss (left) and A.G.C. President John MacLeod (right).

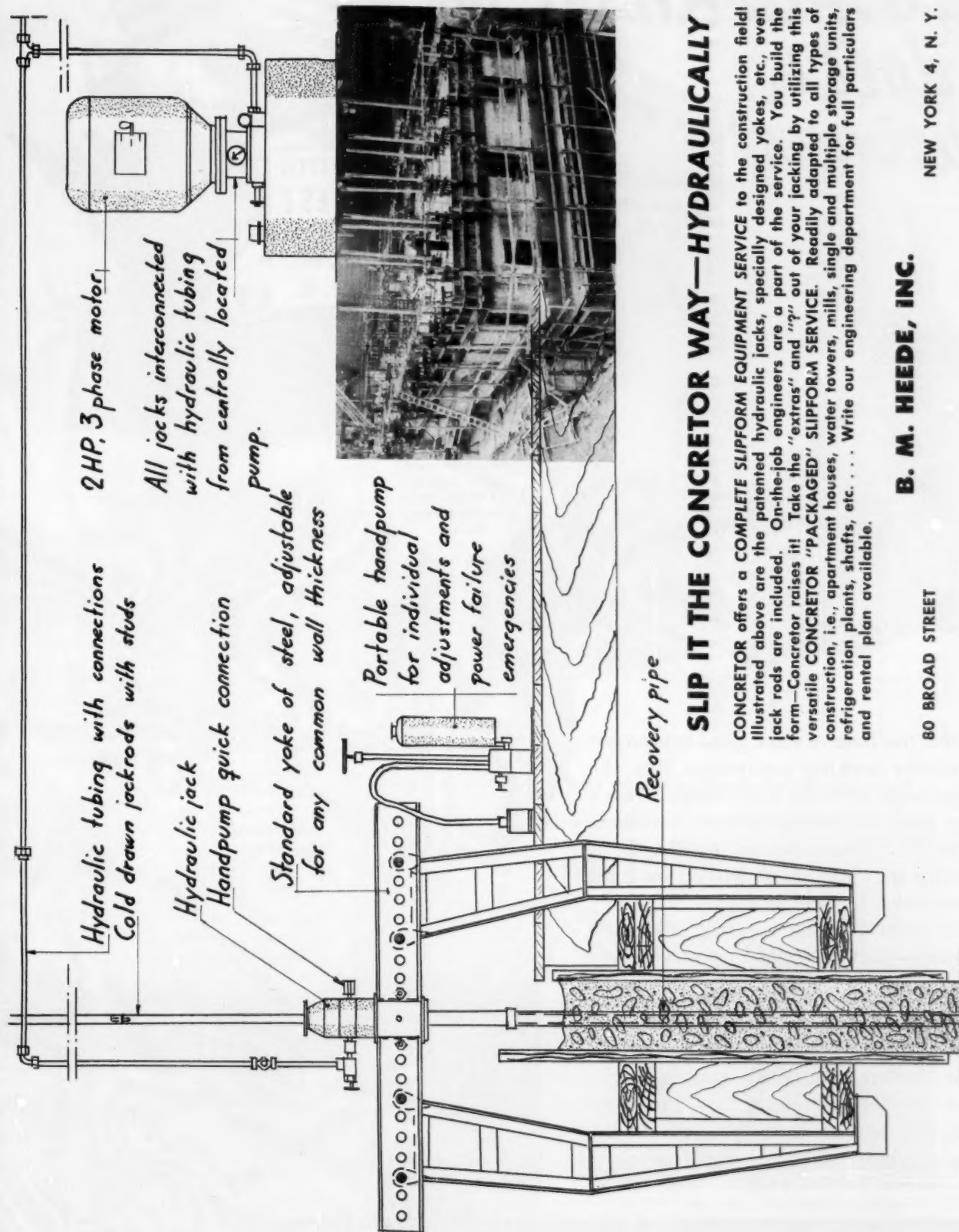
Representative J. J. Dempsey, D-N. Mex., who was a guest at the conference, said that more highways could be constructed if less money were spent on unnecessarily wide rights-of-way.

Conference Secretary Clyde O. Faulk, Santa Fe, opened the afternoon session, Oct. 25, discussing bid openings. He reviewed the current and past systems used by New Mexico, as well as those used by other states. Among the latter types he included the auction bid in which all items, unit prices and totals, are included; and another system by which the awarding officer reads only the total prices, and then the unit prices as requested by bidders. Members at the conference said that a uniform method of bid opening procedures was not necessary and that different systems might be used at different times.

Other subjects discussed by members at the following day's session included contract specifications; federal aid to school construction; highway construction problems; prequalification of contractors; labor relations; and equipment rental.



In picture on left, B. B. Armstrong, Armstrong and Armstrong, Roswell, N. Mex., president of the Western Chapters Conference, talks with C. V. Isbell (right), Isbell Construction Co., during reception party at La Fonda Hotel. Also attending reception (in picture at right) were, left to right: J. D. Marshall, executive director of national A.G.C.; Clyde O. Faulk, secretary-treasurer of the conference; H. L. Royden, conference vice president; and W. A. Snow, manager of the national A.G.C. Building Division.



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»THE CAROLINAS Branch of The Associated General Contractors of America held its 34th annual convention Nov. 14-16 at The Greenbrier, White Sulphur Springs, W. Va., with more than 600 members, associate members and guests attending.

Included among the guests were national A.G.C. President John MacLeod, Paramount, Calif.; Vice President George C. Koss, Des Moines; and Executive Director J. D. Marshall, Washington, D. C. (see page 58).

Chapter President G. E. Moore, G. E. Moore Co., Inc., Greenwood, S. C., in his opening address, welcomed members and guests to the meeting and reported on the highlights of the chapter's activities in the past year.

"This has been another so-called boom year in construction," he said. "Our volume has again hit an all-time high—but not so with our profits. The costs of labor and materials are steadily increasing, while bid prices in every category of construction are steadily declining."

Mr. MacLeod told the contractors that new construction is expected to top \$36 billion this year with maintenance and repair operations bringing total construction activity to more than \$50 billion. This will establish a record for the ninth consecutive year, President MacLeod added.

Mr. Koss, one of the nation's largest highway contractors, reviewed his recent testimony before the President's Advisory Committee on a National Highway Program when he said, "The highway contracting industry has the capacity to carry out such a program (\$50 billion increase in 10 years) promptly, economically, and with increasing efficiency, so that the public will receive continuously greater value for its investment in highway construction."

Mr. Marshall reported that the national A.G.C. now has 6,500 member firms operating in 124 chapters, and that members continue to perform more than 80 per cent of all contract construction in the continental United States, plus a large amount of overseas work.

Robert Patten, managing director of the Carolinas Branch, gave his annual report to the meeting on the accomplishments of the A.G.C. branch during the past year.

Ira Hardin, Atlanta, vice chairman of the national A.G.C. Accident Prevention Committee, spoke on the re-

600 Attend Carolinas Greenbrier Meeting



Newly elected officers and directors of the Carolinas Branch of The Associated General Contractors of America are shown (left to right) during the group's 34th annual convention at The Greenbrier, White Sulphur Springs, W. Va.: W. E. Tulluck, Wannamaker and Wells, Inc., Orangeburg, S. C., director; Raymond A. Bryan, T. A. Loving and Co., Goldsboro, N. C., director; E. M. Spong, Spong Construction Co., Columbia, S. C., director; Roy E. Geise, Boyle Construction Co., Sumter, S. C., director; A. J. Fox, F. N. Thompson, Inc., Raleigh, N. C., incoming president; Jesse M. Coble, highway-heavy contractor, Greensboro, N. C., director; Frank P. Morris, Morris Construction Co., Greenville, S. C., vice president; R. B. Russell, Ruscon Construction Co., Charleston, S. C., director; G. E. Moore, G. E. Moore Co., Greenwood, S. C., immediate past president; Robert Patten, managing director; and J. W. Thompson, Thompson-Arthur Paving Co., Greensboro, N. C., director.

sponsibility of the contractor to train and guide his workers in practicing safety on the job.

Many members and officers of the

A.G.C. of West Virginia, the Virginia Branch, and the Georgia Branch attended the meeting and took part in the discussions.

So. Calif. Chapter Holds Annual Banquet



The Southern California Chapter of The Associated General Contractors of America held its annual banquet and stag party Oct. 21 in Los Angeles' Biltmore Bowl, with more than 900 members and guests attending. Among those present were, left to right: J. A. Thompson, A.G.C. national director; William E. Irish, chapter president; Los Angeles Mayor Norris Poulson; John MacLeod, national A.G.C. president; and R. A. Smith, member of the A.G.C. Executive Committee.

A.G.C. Branch and Chapter Meeting Dates

» A MONTHLY, cumulative list of annual meetings scheduled by chapters and branches of The Associated General Contractors of America, as reported to THE CONSTRUCTOR:

Dec. 18. Nevada Chapter. Reno. Chapter Offices.
Jan. 4. Toledo Chapter. Toledo. Commander Perry Hotel.

Jan. 4-5. A.G.C. of Missouri. Kansas City. President Hotel.
Jan. 10-11. Portland Chapter. Portland. Multnomah Hotel.
Jan. 11. Master Builders Association. District of Columbia. Mayflower Hotel.
Jan. 12. Lake Charles Chapter. Lake Charles. Green Frog Restaurant.

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Jan. 12-13. Kansas Contractors Association, Inc. Kansas City. Muehlenbach Hotel.
Jan. 12-13. Nebraska Chapter. Lincoln. Cornhusker Hotel.
Jan. 14. Alabama Branch. Birmingham. Tutwiler Hotel.
Jan. 15. Oklahoma Builders Chapter. Oklahoma City. Skirvin Hotel.
Jan. 19. Louisville Chapter. Louisville. Chapter Building.
Jan. 19-20. A.G.C. of Iowa. Des Moines. Hotel Savary.
Jan. 19-20. Nebraska Building Chapter. Omaha. Hotel Fontenelle.
Jan. 20. Detroit Chapter, Inc. Detroit Athletic Club.
Jan. 21. Mississippi Valley Flood Control Branch. Memphis. Hotel Peabody.
Jan. 21-22. Montana Contractors Association. Butte. Finlen Hotel.
Jan. 21-22. Colorado Contractors Association, Inc. Denver. Shirley-Savoy Hotel.
Jan. 27. Rhode Island Chapter. Providence. Narragansett Hotel.
Jan. 27. Southern California. Los Angeles. Biltmore Hotel.
Jan. 27-29. A.G.C. of Minnesota. Minneapolis. Hotel Nicollet.
Jan. 27-29. Virginia Chapter. Richmond. Hotel John Marshall.
Jan. 28-29. West Virginia Chapter. Charleston. Daniel Boone Hotel.
Feb. 9. Tacoma Chapter. Tacoma. Winthrop Hotel.
Feb. 10. Contractors Association of Western Pennsylvania. Pittsburgh. Hotel William Penn.
Feb. 12. Kentucky Highway Division. Louisville. Kentucky Hotel.
March 9. Houston Chapter. Houston. College Inn.
April 11-12. Michigan Road Builders' Association. Grand Rapids. Pantlind Hotel.

Tentative Dates

Jan. Alaska Chapter. Seattle, Washington. New Washington Hotel.
Jan. 7. South Florida Chapter. Miami. Miami Shores Country Club.
Jan. 11. General Building Contractors Association. Philadelphia. Barclay Hotel.
Jan. 11. Panhandle of Texas Chapter. Amarillo. 1009 Lincoln Street.
Jan. 13. Baltimore Builders Chapter. Baltimore. Park Plaza Hotel.
Jan. 14. Mountain Pacific Chapter. Seattle. Benjamin Franklin Hotel.
Jan. 17. Milwaukee Chapter. Milwaukee. Schroeder Hotel.
Jan. 27. Michigan Chapter. Lansing. Hotel Olds.

March. Cincinnati Chapter. Cincinnati. Cincinnati Club.

March-April. Metropolitan Builders Association. New York City. University Club.

April. Buffalo Chapter. (Not Selected.)

The Idaho Branch of The Associated General Contractors of America met in Boise, Oct. 1-2, and discussed legislation matters affecting construction, state matching funds for federal-aid highways, and the apprenticeship program of the chapter.

Meeting at the Hotel Boise, the group's legislative committee chairmen from Boise, Idaho Falls, Twin Falls, and Pocatello, conferred with the chapter's board of directors who presented the proposals to the general session. The group also discussed the association's role in raising additional matching funds for federal-aid highway construction.

New Mexico Chapter Meets, Elects Officers



New Mexico Building Branch, A.G.C., held its sixth annual meeting Oct. 30 at the Hilton Hotel, Albuquerque, and elected new officers to serve during coming year. Shown above, left to right, they are: Russell L. Foster, Foster Construction Co., Santa Fe, vice president; T. C. Styron, Styron Construction Co., Albuquerque, president; O. G. Bradbury, building contractor, Albuquerque, secretary-treasurer; and H. D. Hughes, building contractor, Roswell, retiring president. Representatives from the state chapters of architects, civil and professional engineers; the Army Corps of Engineers; and the Associated Contractors of New Mexico, A.G.C., attended the meeting.

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Nebraska's New Lady Senator Well Versed in the Ways of Construction and Politics



Mrs. Hazel H. Abel, the distinguished lady Senator from Nebraska, poses (wearing the orchids) with members of her family who came to Washington, D. C., last month to see her sworn in to serve out the unexpired term of the late Senator Dwight Griswold. Left to right, seated, are her grandson John, 9, daughters Ann, Alice and Hazel (Mrs. Gene Tallman), and her son Mark, 4½. Standing, in the same order, are George P. Abel, Jr., and wife, another daughter, Helen, and Mr. Tallman. (Washington Star Photo)

» MRS. HAZEL H. ABEL, who has engaged in highway and heavy construction for 38 years, was sworn in as United States Senator from Nebraska Nov. 8, to fill out the unexpired term of Senator Dwight Griswold who died last April. Senator Abel, elected to serve until the 84th Congress convenes in January, is replacing Mrs. Eve Bowring, appointed temporarily by Governor Robert B. Crosby.

Mrs. Abel is the third woman in history to win election to the Senate, following such veterans as Mrs. Hattie Caraway of Arkansas, who served from 1931 to 1945, and Mrs. Margaret Chase Smith of Maine, about to begin her second term.

Awed by Office

The new lady Senator, a life-long Republican, amusingly sees herself serving as "receptionist" for Representative Carl Curtis, another Republican, who was elected to serve the full six-year term beginning in January.

She is quite serious about her temporary office, however, for she stated in earnest, "I am awed by the tremendous responsibility. It is some-

thing that doesn't come often in life."

A graduate of the University of Nebraska, Mrs. Abel met her husband George P. Abel, Sr., also a student there, while she was taking advanced mathematics at the university. They were married in 1916 and immediately founded the Abel Construction Co., of Lincoln, and incorporated it with Mr. Abel as president and herself as secretary.

When her husband died in 1937, Mrs. Abel took over as president and ran the firm for 12 years until 1949 when her son, George, Jr., stepped in as its third president. The firm, affiliated with The Associated General Contractors of America, is a member of its Nebraska Chapter in Lincoln. Mr. Abel is currently vice president of this chapter.

Family Present

At the swearing-in ceremony last month, Mrs. Abel was accompanied by her five children who, like their parents, are all graduates of the University of Nebraska. In addition, a son-in-law and a daughter-in-law and two of her four grandchildren were present.

Besides George, Jr., her children are Ann, a brunette who works for a stock company in San Francisco and also models hats; Helen, a reporter on the *San Diego Union*; Alice, who acts as her mother's secretary; and Hazel, married to Gene Tallman, an attorney in Lincoln.

Senator Abel, in her own words, comes from a "strong Republican" family which is active in party organizations and precinct work. Former vice chairman of the Nebraska Republican State Central Committee, Mrs. Abel resigned to run for the Senate. She is still a member of the Central Committee, and serves as chairman of the women's division of the Nebraska United Republican Finance Committee.

A staunch supporter of the Eisenhower Administration, Mrs. Abel campaigned on the basis of supporting the President's program. The lady Senator, successful as a general contractor, also knows victory in campaign politics—she triumphed over 14 men candidates in the Republican primary, defeating her closest rival by more than 20,000 votes.

New NLRB Counsel Nominated

President Eisenhower on Nov. 8 asked for Senate confirmation of Theophil C. Kammholz to become new general counsel of the National Labor Relations Board, replacing George J. Bott, whose term expires Dec. 21.

The nomination was referred to the Senate Labor and Public Welfare Committee, and if the group does not act on Mr. Kammholz' nomination during the current special session, the appointment will die and a new nomination will have to be made to the 84th Congress which convenes on Jan. 5, 1955.

Mr. Kammholz, 44, is a Chicago lawyer with the firm of Vedder, Price, Kaufman and Kammholz, and has served as a regional attorney for the War Labor Board in Chicago in 1943. He is said to be generally well regarded by both management and labor.

Born in Ixonia, Wisc., March 23, 1909, Mr. Kammholz studied at the University of Wisconsin, from which he received both his undergraduate and law degrees.

Earlier this year Mr. Kammholz was a member of the United States delegation at the International Labor Organization meeting in Switzerland.

Moles 1955 Awards Go to Walsh and Jansen

» THE MOLES, a society of leading tunnel and other heavy-engineering contractors, last month named its 1955 recipients of awards given each year for "outstanding achievement in construction."

This year, as in recent years, the awards went to leading contractors affiliated with The Associated General



Mr. Walsh



Mr. Jansen

Contractors of America. They are Thomas J. Walsh, board chairman of the Walsh Construction Co., New York City; and Carl B. Jansen, president of the Dravo Corp., Pittsburgh.

These awards, given each year to outstanding heavy contractors, are made to one member of the society and to one non-member. Mr. Walsh is the member winner.

When the awards are presented Feb. 2, at a banquet in New York's Waldorf-Astoria Hotel, the winners will become the 15th pair of honorees in a series started in 1941 which has singled out such notables as former President Herbert Hoover, Robert Moses, Admiral Ben Moreell and General Brehon B. Somervell.

Mr. Walsh has been board chairman of the Walsh Construction Co., one of the nation's largest construction firms, since 1946. He became president of the company in 1916, after the death of his father. The firm has driven many tunnels throughout the country, including the Queens-Midtown tunnel in New York City.

Born in Davenport, Iowa, in 1886, Mr. Walsh attended St. Mary's (Kansas) College. After graduation he spent the 1907 season as catcher with the Chicago Cubs, before giving up the major leagues for major construction projects.

Mr. Walsh's firm was part of a joint venture of contractors who built the first Grand Coulee Dam, and was one of four firms that erected the

United Nations Secretariat Building. The Walsh Co. has also built Air Force bases in France, and at present is helping build the naval and Air Force bases in Spain.

Mr. Jansen has been president of the Dravo Corp. since 1946. He was born in Fonda, N. Y., graduated from Union College at Schenectady in 1922, and has been with Dravo ever since.

He has directed the construction of many large projects, including substructures for East Bay crossing of San Francisco Bay Bridge, Philadelphia subways, and a section of the Delaware River Aqueduct. During World War II, the Dravo concern built the twin shipways at Newport News, Va., where the world's largest aircraft carriers have been constructed.

The Dravo Corp. is also famous for construction of many dams and river navigation projects.

C.P.I.A. Elects President

R. Floyd Jennings, of Chevy Chase, Md., was elected president of the Contracting Plasterers' International Association at its annual convention recently in Houston. Mr. Jennings succeeds R. Terry Blazier, of St. Louis.

Born in Dawson, Ga., Mr. Jennings began in the plastering contracting business in Atlanta in 1925. He has supervised plastering contracts over wide areas of the country, including the Charity Hospital in New Orleans; the 800-family Laurel homes, Cincinnati; Veterans Administration hospitals in North Carolina, Virginia, Pennsylvania and New York; Military Academy barracks, West Point, N. Y.; and the Interior Department Building and Woodner Apartments, Washington, D. C.

The C.P.I.A., in conjunction with the lathers' and plasterers' international union, operate the National Bureau for Lathing and Plastering, which is to conduct research, apprentice training and on-the-job supervision of plastering projects.



Mr. Jennings

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• Yet the plan of the Griffin engineers and the efficiency of their pumps and wellpoints gave a sure, speedy solution. The truly enormous volume of 20 million gals per day was pumped under perfect control, keeping subgrade bone-dry and permitting economical open cut, except where sheeting was required (see photo) to protect existing sewers and structures.



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Natt McDougall Dies on Eve of Retirement

» NATT McDOUGALL, a builder of railroads, the Pacific Northwest and an early champion of The Associated General Contractors of America, died early in September of a heart ailment.

He was four days short of being 75, the age at which he planned to retire from active work in his firm, the Natt McDougall Co., of Portland, Oreg.

Mr. McDougall was born in Hamilton, Ontario, in 1879 and spent his boyhood in Milwaukee where his father, A. D. McDougall, had moved to enter railroad construction work. While living in Milwaukee young Natt attended Marquette University, graduating in 1899. He was the last surviving member of that class. He then took a year of post-graduate work at Notre Dame University, and later married Christena Maud Kennedy.

In 1902 he joined his father who changed the firm name to A. D. McDougall and Son. Work at this point was exclusively railroad construction that advanced westward roadbeds of the Great Northern, the Northern



Mr. McDougall

Pacific, and the Chicago, Milwaukee and St. Paul Railroads.

Often joint venture contracts were entered into with Winston Brothers Co., Minneapolis, and A. Guthrie and Co., Inc., St. Paul, general contract-

ing firms which helped to organize the national A.G.C. in 1918. Much railroad construction work was done jointly between the Guthrie and McDougall firms in Minnesota, the Dakotas, Nebraska, Montana, Washington, and Oregon. As the railroad work moved west, so did the firms, until they settled finally in Portland in 1911 and became the Guthrie-McDougall Co.

In 1915 Natt McDougall was named vice president and secretary of the combined firm and was in charge of all projects in the Pacific Northwest, including the Cushman Dam in Washington, the Leaburg Dam in Oregon, and the Echo Dam in Utah. Pioneer highway work was also undertaken, and railroad work was continued, culminating in construction of 102 miles of The Great Northern line entering from Klamath Falls, Oreg., and Beiber, Calif., as well as the Great Northern's 8-mile Cascade Tunnel between Scenic and Berne, Washington.

When 97 of the nation's leading general contractors were gathering in Chicago in the winter of 1918 to organize the national A.G.C., Mr. McDougall was out West building railroads. The following year he became active in A.G.C. affairs and took the lead in organizing its Pacific Northwest branch, then known as the A.G.C. of the Pacific Northwest.

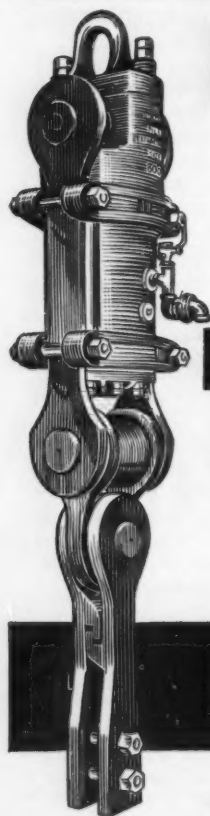
This chapter was made up of some 30 general contracting firms spread over Washington and Oregon. (The original branch has since expanded and been divided and subdivided until it now represents nearly 450 firms in seven chapters.)

Mr. McDougall presided over the first convention of the Pacific Northwest Branch, March 2-4, 1920, in Portland, as president, and was re-elected president the following year.

In 1923 the Natt McDougall Co. was formed with Natt McDougall as president and Jack McDougall, his son, and Robert E. McGary as executive officers.

A member of the Portland (Oreg.) A.G.C. Chapter and the Northern California Chapter, A.G.C., the firm currently does most of its work in Oregon, Washington, and northern California.

Mr. McDougall had planned to retire on his 75th birthday, Sept. 6, but he died four days earlier from complications resulting from a stroke suffered on July 6. He was succeeded by his son Jack as president of the family firm on Sept. 1.



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Heater—Scheu Products Co., P. O. Box 262, Upland, Calif. "Hy-Lo" BJR model salamander is designed for use where headroom is limited. It is 53¾" in height. It is equipped with patented return gas stack by which consumed gases are returned to bowl. On one-half to one gal. per hour of good grade fuel oil it produces from 70,000 to 140,000 B.T.U. It lights with match and burns from 10 to 20 hours on one filling.

Truck—International Harvester Co., 180 N. Michigan Ave., Chicago 1. RF-230 is specially designed for off-highway service. With g.v.w. rating of 60,000 lb., it is powered by new 201-h.p. International RD-501 engine which delivers 430 ft. lb. torque at 1,600 r.p.m. Model is designed for 8- or 9-yd. concrete mixers, or for service in stripping operations, highway and dam construction, earthmoving operations, quarry work, etc. Equipment includes hydraulic, full-power steering; air brakes; 15,000-lb. front axle; 46,000-lb. rear bogie; 12-volt electrical system; 60-gal., right-side, step-type fuel tank; 15" clutch. Standard wheelbase is 175".

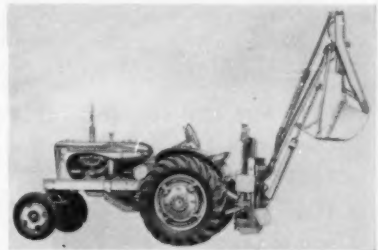
Engine—Kohler Co., Kohler, Wis. Model K160, 4-cycle, air-cooled, gasoline engine, rated 6.6 h.p. at 3,600 r.p.m., is now available with electric starting and is also available for direct-mounting applications. Designated as K160S, it is equipped with 6-volt electric starter and generator, ignition switch and starter button. As K160P, its machine-faced crankcase and threaded power take-off shaft extension make it particularly adaptable for direct mounting on pumps.

Electric Plant—Kohler announces new 15 kw. gasoline-powered AC electric plant available in 6 models with remote control or stand-by starting and with varying voltage outputs. It is water-cooled with large radiator, belt-driven centrifugal pump and blower fan. It features adjustable jet carburetor with automatic choke and mechanical fuel pump with oil bath air filter. Six-cylinder engine produces 51 h.p. at 1,800 r.p.m. and has 3½" bore and 3¾" stroke.

Gradall—The Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3. Self-propelled wagon mount for "Gradall" will be built on order. It has wheel base of 108" and turn radius of 21'7" to right and 19'10" to left. Controls for operating wagon are mounted on panel in "Gradall" cab. Hydraulic accelerator is actuated by foot pedal in cab. It is mounted on 2 Timken axles with 6 11:00 x 20 12-ply tires. Front axle is Timken FE-900, 10,000 lb., and rear axle is Timken U-200, 26,000 lb. Front axle has 2 tires and rear axle is dual tire arrangement. Unit is powered by 6-cylinder Continental engine developing 97 h.p. at 3,000 r.p.m. It has 244

cu. in. displacement and 20-gal. capacity fuel tank. Engine is slung between frame of wagon. Air brakes are controlled from cab. Unit has one speed forward and one reverse with top speed of 10 m.p.h.

Tractor—Allis-Chalmers Tractor Division, Milwaukee 1. Model WD-45 is wheel tractor equipped with Henry backhoe. Other Henry hydraulically operated attachments, including back-filler blade, straight and angle dozers and front-end loader, are available for WD-45. Weighing approximately 4,000 lb., it is powered by Allis-Chalmers "Power-Crater" gasoline engine, valve-in-head design unit developing 45 h.p. from 226 cu. in. piston displacement and 6.5 to 1 compression ratio. Features of machine are outlined in Catalog MS-982 available from manufacturer.



Allis-Chalmers Model WD-45

Transit Level—Warren-Knight Co., 136 N. 12th St., Philadelphia 7. Model 38 transit level looks and is operated like transit but retains feature of being adjusted like wye level. Features include 24-power internal focusing telescope; coated optics; sealed-in objective; large eyepiece cap; large vertical arc; cross wires on glass reticle; nylon bearing for focusing pinion; one-piece U-shaped standard and top plate; steel center; covered leveling screws; solid, heavily reinforced horizontal limb; vernier opening covered; nylon leveling screw heads; bronze and black finish; sturdy tripod.

Trencher—Auburn Machine Works, Inc., Auburn, Nebr. "Jeep-A-Trench Gear-Draulic" is gear-driven trencher with gears running in oil. Unit is well forward in Jeep body over frame. Box section frame is electrically welded, completely enclosed and serves as dust-proof housing for major units of trencher. Engine power is transmitted through gear drive connected to Jeep

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center power take-off, supplying power to digging ladder. Hydraulic drive provides unit with forward speed infinitely variable from zero to fully engaged. Boom is raised and lowered hydraulically to any position in 190° arc of travel. Weight of trencher is approximately 1,750 lb. "Gear-Draulic" will handle trench widths from 6" to 14" and any depth up to 6'. Four levers control operation. Jeep clutch, gear engagement, raising and lowering of boom and trenching speed are controlled from one spot.

Bituminous Plant—*Pioneer Engineering Works, 1515 Central Ave., Minneapolis 13.* Model 102 is portable 100- to 175-ton-per-hour central hot mix plant. It has 2 main units—combination drier-dust collector and combination gradation-mixer unit, each assembled in straight line on single chassis. Auxiliary units are designed for ready loading and towing in line behind main units. These are feeder and conveyor for delivering aggregates to drier, bucket elevator for transferring material from drier to gradation-mixer, truck-mounted burner-combustion chamber and diesel-generator set. It can be furnished with diesel or diesel-electric power or can be completely electrified. Detailed specifications are given in bulletin, S.E.D. 26, available from manufacturer.



Pioneer Model 102 bituminous plant

Steel Washers for Structural Steel Framing—*Wrought Washer Manufacturing Co., 2249 S. Bay St., Milwaukee 7.* Special carburized steel washers are designed as integral part of high-tensile steel bolted joining of steel members. They are marketed under trade name "Mil-Carb" and are fabricated from prime carburizing quality special soundness steel, according to manufacturer. They conform to specifications (A.S.T.M. Designation A325) applying to high-tensile bolts, nuts and washers. They are flat and smooth, with dimensions conforming to current requirements for heavy plain carburized washers as established by American Standards Association and

are available in 6 sizes from 5/8" to 1 3/8".

Airplane—*Aero Design & Engineering Co., Bethany, Okla.* Three-bladed propeller is being made for use on new "Swept-Tail" Aero Commander 560. It has improved cabin quietness and resulted in smoother engine-propeller operation, manufacturer states. It is available as optional equipment. Propeller is 6" shorter than 2-bladed model, providing increased clearance between propeller tips and fuselage as well as decreased propeller tip velocities. It is hydro-selective, constant-speed propeller and is designed to be completely full feathering. Feathering is accomplished by use of spring mechanism and unfeathering is accomplished by use of engine oil pressure. It was developed by Hartzell Propeller Co. with cooperation of Aero Design & Engineering Co.

Plaster Mixers—*The Knickerbocker Co., 653 Liberty St., Jackson, Mich.* Two plaster and mortar mixers feature increased capacity over similar previous models. No. 9, "Master-Mixer," takes full 2-bag batch. Mixing shaft and bearings are protected by labyrinth packing glands. Drum and mixing shaft are carried by sealed, cartridge-type, self-aligning ball bearings. Adjustable axle extends to over-all width of 46 1/2" and telescopes to 35 1/2". Power is furnished by 7 h.p. gasoline engine or 3 h.p. electric motor. No. 4, "Mix-Miser," is one-bag machine, 29 1/2" wide. Bearings are self-aligning, sealed units are protected by labyrinth packing glands. Heavy-duty blades and hoes are replaceable. It is available with 3 1/2 h.p. gasoline engine or 1 h.p. electric motor. No. 9 and No. 4 mixers replace slightly smaller No. 6 and No. 3 mixers.

Door—*Kawneer Co., Niles, Mich.* Aluminum flush panel door uses fluted pattern on anodized aluminum panels. It features "sandwich" construction utilizing impregnated, moisture-resistant honeycomb core and hardboard reinforcing of aluminum for added strength. Door has improved moisture seal, making it suitable for use as exterior entrance as well as interior installations. Framed by extruded tubular frame sections, door is available in butt-hung or offset pivot models. Basic design features solid panel; other models are available with window lights and louvered openings.

NEW LITERATURE

Tractor-Shovel Attachments—*The Frank G. Hough Co., 819 7th St., Libertyville, Ill.* Sixteen attachments for "Payloader" tractor-shovels are presented in new bulletin. Illustrated and described are rotary "V" and trip-blade snow plows, hydraulic back-hoe, backfiller blade, crane hook, lift fork, lumber-log rack, pick-up sweeper, cabs, winches, scarifier teeth, land-clearing rake, tine fork, etc. Entire line of 7 sizes of tractor-shovels are shown.

Finisher—*Barber-Greene Co., Aurora, Ill.* Model 879-A bituminous finisher is presented in catalog. Job pictures show it at work in wide range of applications and locations. Simplified drawings illustrate its principles of automatic leveling and thickness control, tamping compaction and control of crown and super-elevation. Cut-away photo shows inner mechanism. Accessories are shown.

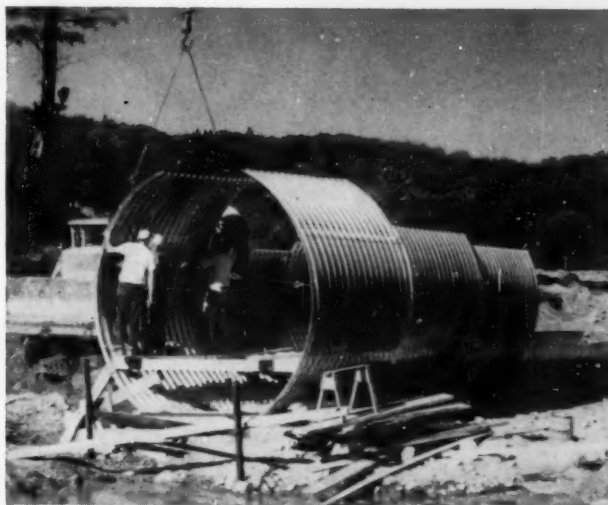
Crane—*Austin-Western Co., 618 Farnsworth Ave., Aurora, Ill.* Bulletin AD2253 describes indoor-outdoor hydraulic crane. Included with specifications and performance data are diagrams on working ranges, manual boom extensions, minimum aisle widths for turns, etc. Attachments and special equipment are described.

Truck-Crane—*Harnischfeger Corp., 4610 W. National Ave., Milwaukee 46.* Bulletin TX-159 presents P&H Model 105 TC truck crane. Complete details on crane and carrier are given, along with illustrations of 105 TC at work on variety of jobs.

Earthmovers — *LeTourneau-Westinghouse Co., Peoria 5, Ill.* *C. Tournapull Reprint Book No. 7* presents reports on use of C Tournapulls on large and small road building contracts. They describe and illustrate equipment working on short and long hauls, city street, state highway and super-highway projects, handling material ranging from yellow clay to abrasive sand.

Trenching Equipment—*The Cleveland Trencher Co., 20100 St. Clair Ave., Cleveland 17.* Entire line of trenchers and backfillers are described in Bulletin S-120. Action photos illustrate various job applications. Text points out design and construction features. Brief specifications of Cleveland trailers for general equipment and materials hauling are included.

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Concrete Mixers—Kochring Co., 3026 W. Concordia Ave., Milwaukee 16. Bulletin describes mechanical and application features of line of large volume mixers of 1- to 4-cu. yd. capacity. Tilting and non-tilting types are presented. Breakdown of structural features of each type is included along with pictures showing actual installations.

Tractor—Allis-Chalmers Tractor Division, Milwaukee 1. Inside and out features of HD-9 diesel-powered crawler tractor are shown in 3-page cut-away view in new catalog on this machine. Other illustrations show engineering, mechanical and operating features of tractor. On-job photos show it performing on variety of projects. Allied equipment and special accessories are pictured.

Tractor Service—Caterpillar Tractor Co., Peoria 8, Ill. Protection for Your Profits (Form D484) describes dealers' service equipment, preventive maintenance practices and methods. Field service and parts service are explained.

Bituminous Distributors—Rosco Manufacturing Co., 3118 Snelling Ave., Minneapolis 6. Complete line of

NEW LITERATURE

bituminous distributors, haul tanks, brooms and street flushers are presented in Bulletin 54-4. Pictures and text describe each unit and give sizes available of various models.

Prestressed Construction—The Preload Co., 211 E. 37th St., New York 16. Pamphlet describes company's licensing program for prestressed construction. It describes the categories of prestressed concrete construction for which it grants licenses and illustrates projects in these categories.

Dump Bodies—The Heil Co., Body and Hoist Sales Division, Milwaukee 1. Bulletin BH-54110 illustrates features and specifications of Heil extra-heavy-duty model HH-11 dump bodies. Construction features designed to make bodies stand up under hard use are described. Complete specifications and dimensions are included.

Rock Bits—Brunner & Lay, Inc., 9300 King St., Franklin Park, Ill. Bulletin B-1 presents tungsten carbide "Rok-Bits." Bits are illustrated in 2 charts, one covering shoulder union types and other bottom drive bits. Detailed recommendations are made for use of every bit—thread type, size of drill steel and machine normally used, range of sizes with specific thread, etc.

Asphalt Plant—Standard Steel Corp., 5001 S. Boyle Ave., Los Angeles 58. Bulletin 541 presents Model TM portable batch type asphalt plant. It covers all features of plant, including gradation and weight control and stresses portability combined with capacity of 40 to 50 tons per hour. Featured is "Self-Lift" erecting device which permits entire mixing cage to be raised in less than 30 minutes.

Bodies and Hoists—The Galion All-steel Body Co., Galion, Ohio. Catalog describes Model 12N-5 bodies and Models # 1T, 880 and 77353 hydraulic hoists. Illustrations include cut-away views, drawings and action photos. Features are described and complete specifications are given.

Concrete Pressure Pipe—Price Brothers Co., 1932 E. Monument Ave., Dayton 1. Booklet deals with history of concrete in water lines and its present application in prestressed concrete pressure pipe. It shows prin-

ciples of tension and compression in pipe and how prestressing makes possible near "zero" compression with water line operating at design pressure. Catalog section lists and illustrates types of Price concrete pressure pipe for water transmission and distribution lines, subaqueous intakes and outfalls and sewage force mains. Included are cut-away drawings of each type of pipe, with sizes, weights and normal operating heads.

Doors—Detroit Steel Products Co., 3143 Griffin St., Detroit 11. Catalog, *Fenestra Hollow Metal Doors, Swing and Slide*, gives detailed information on 7 styles of doors—entrance, flush-type, panel swing, panel slide, Underwriters', flush and panel residential swing and sliding closet. They are presented in standardized types and sizes adaptable to all kinds of buildings. Construction features, advantages, uses, hardware and equipment, installation instructions, specifications and charts of types and sizes are included.

Glass Block for Skylights—Pittsburgh Corning Corp., 1 Gateway Center, Pittsburgh 22. Booklet presents "Skytrol" glass blocks of special optical design and having high insulating value for use in skylights. Information on physical performance, technical data on light transmission, insulation values are given and installation detail drawings and complete specifications are covered.

New Construction Movies

Two 16 mm color-sound movies featuring material-handling excavators in action are available from the Marion Power Shovel Co. One features Marion 191-M and other features company's entire line. They are offered without charge to organizations and companies upon request to the Advertising Department of Marion Power Shovel Co., Marion, Ohio.

Unimatic Corp. has produced a 16 mm color and sound movie illustrating the features of the Model CW-4 detachable ditcher. Job applications on which this Unimatic-Caterpillar combination can be used are also covered. Arrangements for showing of film may be made through local Unimatic-Caterpillar dealers or through Unimatic Corp., P. O. Box 1166, Tulsa, Okla.

MANUFACTURERS' NOTES

Robert P. McKenrick has been promoted to vice president-general manager of BLAW-KNOX Co.'s newly formed Construction Equipment Division at Mattoon, Ill.

Lawrence E. MacDonald has been appointed general sales manager for BUCYRUS-ERIE Co.

G. Allen Lovell has been appointed assistant general manager of the mechanical goods division, UNITED STATES RUBBER Co. He succeeds Herbert G. Kieswetter who has been named executive assistant to the general manager of the international division.

Charles G. Hugus, Jr., has been elected assistant vice president of L. B. FOSTER Co.

A. F. Milbrath, chief engineer and vice president of WISCONSIN MOTOR CORP., retired from active duty October 31, after 45 years of continuous service.

JOSEPH T. RYERSON & SON, INC., is now manufacturing bar joists for floor and roof construction. Production facilities have been developed at the Chicago plant for fabricating the welded open-web type of joist with top chord of hot rolled steel angles, bottom chord of round hot rolled bars or hot rolled angles and W-shaped web of continuously bent round bars. Joists will be supplied fabricated to order, according to building plans.

Ralph W. Gundersen has been appointed chief industrial engineer of AMERICAN HOIST & DERRICK Co.

Arrangements have been completed by THEW SHOVEL Co. for purchase of the controlling stock of Dixie Crane & Shovel Co.

HARNISCHFEGGER CORP. has purchased the patent and manufacturing rights of the "Sierra Loader" from the C and D Manufacturing Co. Sales of loader will be handled by P&H Power Crane and Shovel Division. T. H. Rutherford, formerly with C and D, has joined Harnischfeger to direct sales of this machine.

A. G. Lindquist, secretary and comptroller of GARDNER-DENVER Co., has been elected vice president of the company.

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Manufacturers' addresses are listed on page 78

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Asphalt Plants (Portable)
Barber-Greene Co.
Iowa Mfg. Co.
Standard Steel Works
Universal Engineering Corp.

Axles (Truck)
Eaton Manufacturing Co.

Backfillers
Bucyrus-Erie Co.
Cleveland Trencher Co.
Harnischfeger Corp.
Parsons Co.
Unit Crane and Shovel Corp.

Batchers
Blaw-Knox Division
Butler Bin Co.
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
C. S. Johnson Co.

Bearings (Anti-Friction, Tapered Roller)
Hyatt Bearings Division
Timken Roller Bearing Co.

Belting
Carlyle Rubber Co.

Bins
Blaw-Knox Division
Butler Bin Co.
Heltzel Steel Form & Iron Co.
Iowa Mfg. Co.
C. S. Johnson Co.

Bits (Detachable Drill)
Ingersoll-Rand Co.
Timken Roller Bearing Co.

Blasting Accessories
American Cyanamid Co.

Bridges
American Bridge Division
Armco Drainage & Metal Products

Buckets (Clamshell & Dragline)
Blaw-Knox Division
Bucyrus-Erie Co.
Harnischfeger Corp.
C. S. Johnson Co.
Owen Bucket Co.
Wellman Engineering Co.

Buckets (Concrete)
Blaw-Knox Division
Construction Machinery Co.
Heltzel Steel Form & Iron Co.
Insley Manufacturing Corp.
Owen Bucket Co.

Buildings
Allied Structural Steel Cos.
American Bridge Division
Armco Drainage & Metal Products
Luria Engineering Co.
Macomber, Inc.
Truscon Steel Division

Bulldozers
LeTourneau-Westinghouse Co.

Car Pullers
Clyde Iron Works
Superior-Lidgerwood-Mundy Corp.

Cement (Common and Special)
Lehigh Portland Cement Co.
Lone Star Cement Corp.
Universal Atlas Cement Co.

Cement (White)
Trinity White, General Portland Cement Co.
Universal Atlas Cement Co.

Clamps (Hose)
Dixon Valve & Coupling Co.

Column Forms
DesLauriers Column Mould Co.

Compressors
Allis-Chalmers Co.
Ingersoll-Rand Co.
LeRoi Co.

Concrete Mixers, Pavers, Tampers
Chain Belt Co.
Construction Machinery Co.
Foote Construction Equipment Division, Blaw-Knox Co.
Jaeger Machine Co.
Knickerbocker Co.
Koehring Co.
Kwik-Mix Co.
T. L. Smith Co.
Worthington Corp., Construction Equipment Division

Concrete Slab Void Tubes
Sonoco Products Co.

Concrete Vibrators
Concrete Surfacing Machinery Co.
Electric Tamper & Equipment Co.
Ingersoll-Rand Co.

Conveying Machinery
Barber-Greene Co.
Chain Belt Co.
Iowa Mfg. Co.
Universal Engineering Corp.



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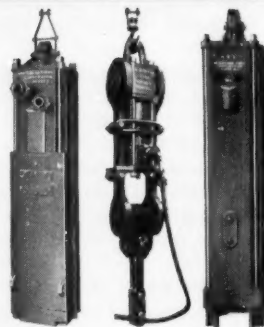
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Clyde Iron Works
Harnischfeger Corp.
Insley Manufacturing Corp.
Koehring Co.
Northwest Engineering Co.
Thew Shovel Co.
Unit Crane and Shovel Corp.

Crushing Machinery

Allis-Chalmers Co.
Austin-Western Co.
Iowa Mfg. Co.
Universal Engineering Corp.

Culverts

Albert Pipe Supply Co.
Armco Drainage & Metal Products

Cutters (Abrasive)

Wodack Electric Tool Corp.

Decking (Roof Steel & Aluminum)

Macomber, Inc.

Derricks

Clyde Iron Works

Doors (Metal, Wood)

Kinnear Mfg. Co.
R. C. Mahon Co.
Truscon Steel Division

Dredging Machinery

Harnischfeger Corp.
Northwest Engineering Co.

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Bucyrus-Erie Co.
Ingersoll-Rand Co.
Timken Roller Bearing Co.

Drills (Electric)

Wodack Electric Tool Corp.

Electric Plants

Kohler Co.

Elevators (Material)

Chain Belt Co.
Iowa Mfg. Co.
Universal Engineering Corp.

Engines

Allis-Chalmers Tractor Div.
American Hoist & Derrick Co.
Caterpillar Tractor Co.
Continental Motors Corp.
Detroit Diesel Engine Division
Harnischfeger Corp.
Ingersoll-Rand Co.
International Harvester Co.
Kohler Co.

Engines—Cont.

LeRoi Co.
Reo Motors, Inc.
Waukesha Motor Co.
Wisconsin Motor Corp.

Expansion Joints

Laclede Steel Co.
Servicised Products Corp.

Explosives

American Cyanamid Co.

Financing

C.I.T. Corp.

Finishing Machines (Bituminous)

Barber-Greene Co.
Foote Construction Equipment Division

Finishing Machines (Concrete)

Blaw-Knox Division

Flooring

Truscon Steel Division

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Blaw-Knox Division
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Heltzel Steel Form & Iron Co.
Joseph T. Ryerson & Son, Inc.
Sonoco Products Co.
Symons Clamp & Mfg. Co.
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Caterpillar Tractor Co.
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Galion Iron Works & Mfg. Co.
Koehring Co.

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Iowa Mfg. Co.

Grinders (Electric)

Wodack Electric Tool Corp.

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Wodack Electric Tool Corp.

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Construction Machinery Co.
Harnischfeger Corp.
Ingersoll-Rand Co.
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Blaw-Knox Division
Chain Belt Co.

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Blaw-Knox Division
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Thew Shovel Co.
Vulcan Iron Works

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American Bridge Division
Armco Drainage & Metal Products
Bethlehem Steel Co.
Union Metal Manufacturing Co.

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Armco Drainage & Metal Products
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Rice Pump & Machine Co.
Sterling Machinery Corp.
Worthington Corp., Construction Equipment Division

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Wisconsin Motor Corp.

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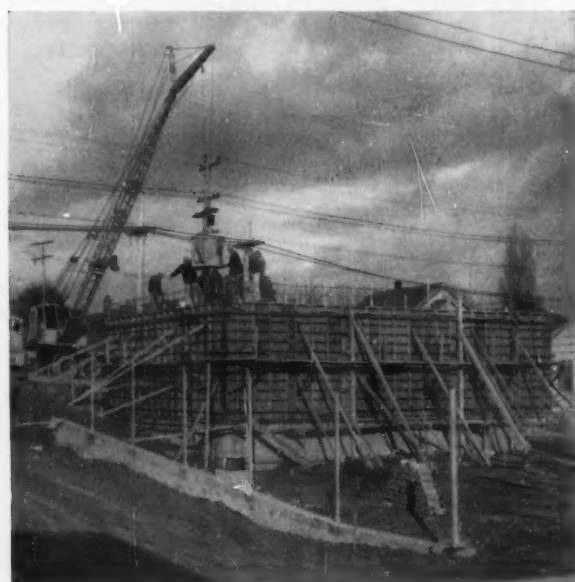
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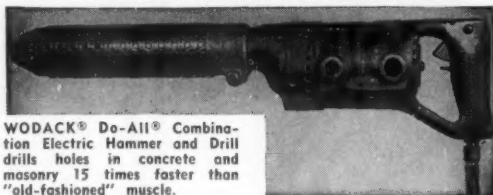
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